

The Complex Nature of Family Conflict: Power, Effectiveness, and Context

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ABSTRACT

The complex nature of family conflict: Power, effectiveness, and context

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The process of socialization that occurs through relationship interactions plays a crucial role in children's development (Parke & Buriel, 2006). Further, it has been argued that interactions that involve more than two individuals (i.e., polyadic interactions) should be considered as a basic interaction unit (Minuchin, 1985; Sameroff, 1983). As such, this set of studies center around family members' use of power in polyadic family conflict during early childhood. Specifically, three manuscripts focus on (a) family members' use of power tactics as they vary by individual and relationship contexts, (b) power effectiveness as it is assessed by two means, microscopically (i.e., conflict process) and macroscopically (i.e., win-lose outcome), and (c) conflict context variables, including conflict role, topic, and social domain. These topics were studied using transcripts from previously collected data on naturalistic family interactions in the home setting (Ross, Filyer, Lollis, Perlman, & Martin, 1994). In the present set of studies, the sample consisted of 210 polyadic family conflict sequences from 35/39 families consisting of two siblings, approximately 4- and 6-years of age, and their parents. Behavioural coding was implemented to quantitatively account for power behaviours, power move effectiveness, and conflict context variables (see Appendix). Results are discussed in light of previous research with a particular focus on future research recommendations considering the novelty and complexity of these three studies. When studying polyadic family conflict, these studies provide (a) a strong support for taking the individual and relationship contexts into account, (b) confirmation of variability in

individuals' ability to effectively influence others, and (c) initial insight into how the conflict context variables come into play during polyadic interactions. Taken together, this program of research allows for a deeper understanding of children's development through informal family interactions in the home setting.

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Contributions of Authors

The first author of each manuscript was Sandra Della Porta, who created and controlled the behavioural coding schemes, organized the data, planned and executed the analyses, and wrote this dissertation. The second author of each manuscript is Nina Howe, her research supervisor, who helped for the research ideas and facilitated the production of this document. In Study 2, Shireen Abuhatum is the third author as she played a significant role in creating the power effectiveness coding scheme and helped to develop precise details towards this rigorous coding scheme. In Study 3, Ryan Persram is the third author as he contributed significantly towards the organizing and filtering the conflict data in order to meet the requirements of this study. Finally, Hildy Ross is the last author in each study as she was the primary investigator of the original data collection used in this dissertation.

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General Introduction

Children's experiences in close relationships (i.e., parent-child, sibling) provide infinite opportunities to learn, rehearse, and refine social skills such as language and communication, cooperation, and conflict resolution strategies (Hartup & Laursen, 1991, 1999; Parke & Buriel, 2006). Such skills, among many others, allow children to become adaptive and competent functioning members of society (Grusec & Davidov, 2007; Maccoby, 2007). As such, the process of socialization through relationship interactions has been found to play a crucial role in children's development (Parke & Buriel, 2006). Specifically, each partner has access to a variety of influential behaviours (i.e., power resources), which can vary by individual, relationship, and social context. Further, children's close relationships provide a context that may foster conflict as a result of physical proximity, shared tasks, and long-term history (Emery, 1992). As such, episodes of conflict between family members are an ideal window through which individuals' use of power resources can be studied (Grieshaber, 2004; Kuczynski, 2003).

Although much research has focused on the use of conflict strategies (i.e., aggression, insults, ignoring) in children's dyadic relationships (e.g., DeHart, 1999; Howe, Rinaldi, Jennings, & Petrakos, 2002; Perlman, Garfinkel, & Turrell, 2007; Perlman & Ross, 2005; Shantz, 1987), less work has been done on polyadic family conflict (i.e., involving three or more family members). As such, the current research program focused on the identification of power resources utilized by each family member, their effective use of power as well as the association between power and the conflict context (i.e., actor roles, topic, and social domain) during naturalistic episodes of

polyadic family conflict. This information can, in turn, aid in the understanding of key aspects of family development in the social environment (i.e., close relationships).

Network of Family Relationships

According to family systems theorists (Minuchin, 1988, 2002; Sameroff, 1994), the family represents an organized system comprised of subsystems, which is defined by wholeness, interdependence, and circularity that strives to maintain homeostasis. Each subsystem in this network of relationships (i.e., marital, parent-child, sibling) comprises differing boundaries and interaction styles based on family roles and functions (i.e., the flow of mutual influence is unique to specific pairs). In the milieu of socialization, each relationship has a unique set of demands, rewards, and challenges to a child's development of socio-cognitive abilities (Maccoby, 2007; Parke & Buriel, 2006).

The parent-child relationship is described as complementary or hierarchical where each partner holds different but dependent roles (Dunn, 1993). In this dyad, the parent is seen as having greater knowledge or higher social power while at the same time providing nurturance and support. Indeed, the goal of parent-child interactions is to provide advice and support in dealing with social situations, educate children concerning social norms and rules, and manage their child's social life as well as regulate opportunities for social and cognitive experiences (Parke & Buriel, 2006). As such, during conflict, parents tend to take on the role of socializers and have the responsibility of serving as a role model and for teaching appropriate methods of resolving conflict.

Sibling relationships include both reciprocal and complementary relations (Hartup, 1989; Hartup & Laursen, 1991; 1999). Their interactions are reciprocal in that they involve a relatively balanced amount of power and nurturance as they interact as

equal partners with similar goals and expectations. Siblings can also be complementary due to their difference in age and developmental characteristics, which may assign the dominant role to one child over the other (Dunn, 1993; Hinde, 1979). In the parsing of this dyad, DeHart (1999) states that older siblings tend to initiate behaviours, manage, teach, and nurture younger siblings, whereas younger siblings typically imitate, prefer to be managed, learn, and accept nurturance.

Although parent-child and child-child family relationships are distinct and unique, they also share some similarities in that they are both characterized by a high number and variety of interactions over time (Collins, 1999). As a result, these bidirectional, mutual, continuous, and long-term interactions provide a contextual continuity for these relationships (Arranz Freijo, 2000). A crucial factor in the reciprocal nature of these familial dyadic exchanges is equal agency, which acknowledges that children and their relational partners each have individual ideas, beliefs, and knowledge about their relationship and are mutually involved in socialization (Cummings & Schermerhorn, 2003; Pontecorvo, Fasulo, & Sterponi, 2001). This idea is supported by social-constructivist theory, which postulates that children are active learners by cognitively constructing their own knowledge about the world based on social interactions with others (Piaget, 1971; Vygotsky, 1978).

In the relationship context, children can gain knowledge about the world by being actively involved in the learning process (Rogoff, 1990, 1991). For instance, using power resources during conflict, cooperation, negotiation, mutual responsiveness, and play can be seen as an indication of a child's use of his/her own abilities and volition (Kuczynski, 2003). By executing different types of power that influence their partner in the

relationship, through practice and interaction patterns, children learn how to solve problems and control their emotions and thought processes.

Power

The concept of power is multifaceted, consisting of individual, relational, and cultural resources (Grieshaber, 2004; Kuczynski, 2003). It is described as part of social relationships rather than a personal attribute: therefore all social criteria may influence sources of power (Hinde, 1979). These criteria can vary across relationships and even within the same relationship in different social contexts. Accordingly, social power is defined as the available resources person A has that s/he can utilize to influence person B (French & Raven, 1959; Raven, Schwarzwald, & Koslowsky, 1998). Influence, in turn, 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).

Further, Emerson (1962) stated that to say one individual holds power is useless unless it is specified over whom. Ties of mutual dependence between dyads imply that each person is in a position to grant or deny, facilitate or hinder the other's gratification (Emerson, 1962). Hence, power is best considered as a variable that is subject to bidirectional processes in which all partners in an interaction are vulnerable and influential with regard to each other (Grieshaber, 2004; Lollis & Kuczynski, 1997).

Theoretical underpinnings of power. Abramson, Cutter, Kautz, and Mendelson (1958) describe three common elements of social power: actor, objectives, and lines of action. First, an actor must be capable of initiating social action. Second, the actor must have the ability to create objectives, such as retrieving a toy from another child for one's own play. Third, one must be able to identify the lines of action (i.e., all possible suitable

behaviours) required to achieve the preconceived goal. A key element in the execution of social power is the lines of action that are implemented, which has received the least amount of attention in the study of social power. Further, it is the sequences of these lines of action rather than a single action that is usually required for the achievement of a goal. Finally, Abramson et al. point out that the assessment of social power is pointless unless it compares the power of two or more actors during an interaction, further emphasizing the importance of studying power in close relationships. In support of this idea, Foucault stated that, “power operates from the top down and the bottom-up” (1965, p. 185; as cited by Strober, 2005). Foucault views all individuals as part of a network of relationships where each person has the ability to influence a target and can be influenced by a partner (i.e., there are neither powerless nor all-powerful individuals).

Types of power. French and Raven (1959) distinguished between six different kinds of power including coercive, reward, legitimate, referent, expert, and information power, which can account for the various effects of social influence. Coercive power occurs when the recipient expects that s/he will be punished if s/he fails to conform to requests. Reward power is defined as a person holding power on the basis of the ability to reward the other with positive or negative reinforcement. Legitimate power stems from internalized values in the recipient, which dictates that the person in power has an inherent right to influence another person by the laws, customs, and practices evident in a particular culture. Referent power is based on identification with a specific person. Expert power is granted on the basis of one individual having advanced knowledge within a particular domain. Information power is based on one’s ability to persuade another person by using logic and reasoning. This type of power can be divided into two levels:

simple information, defined as a demand without explanation, and elaborated information, defined as providing reasons, explanations or justification about one's own or another's behaviour (Dunn & Munn, 1987; Phinney, 2001). A final type of power utilized in this research is questioning, which includes three classes of questions: yes/no clarification, "wh" questions (e.g., when, where, why) and alternative questions, where one would expect one reply to two or more options presented in the question (Wang, 2006).

Power effectiveness. Power in social relationships is defined by the availability of resources each partner in the dyad has so that an individual may influence the behaviour of the other person (Raven, 1993). Yet, the use of power and the influence that that power yields is a different phenomenon, in which one can execute power but may not necessarily be effective in influencing another's thoughts or actions. Therefore, the study of power effectiveness is another crucial element to the study of power in the family context. According to interpersonal communication specialists (Hargie & Dickson, 2004), methods of persuasion can be studied by immediate success (i.e., actor move changing the target's beliefs, feelings, knowledge or behaviour), lack of success (i.e., attempting to change a target's behaviour without success) or by delayed success (i.e., long-term effect of influential behaviours). Previous research has focused on the first two methods of assessing effective persuasion, that is, through successful and unsuccessful immediate target responses to power moves microscopically (Abuhatoum & Howe, 2013; Ohbuchi & Kitanaka, 2001; Raven, 2003). Yet, power and power effectiveness can also be viewed as a longer-term effect (i.e., considered in terms of resolutions) or as it relates to an actor winning a conflict (i.e., macroscopically; Recchia, Ross, & Vickar, 2010). This study utilizes both methods of assessing power effectiveness in family conflict.

Power in close relationships. Traditional hierarchical conceptions of power asymmetry in the parent-child relationship have been conceived as static, primarily emphasizing that parents have more power than children (Emerson, 1962). However, recent research indicates that this assumption does not reflect actual use of power in everyday family life; rather, different types of power reside in both parents and children depending on context (Kuczynski, 2003). Parents can control reinforcement through rewards, modeling, and responsiveness, while children can control their construction of the social experience, develop self-understanding as a causal agent by applying behavioural strategies and structuring their experience to create desired outcomes (Laible & Thompson, 2007; Punch, 2005). In sibling relationships, power is more symmetrical considering siblings' familial status and developmental stage, but may also depend on the age gap between siblings.

Research on children's networks of relationships (Furman & Buhrmester, 1985) indicates that children have more power in interaction with other children than with adults. In fact, they recommend studying children's relationships from a comparative point of view. The simultaneous examination of different relationships in which a child is a member can aid in the integration of different bodies of literature (i.e., parent-child and sibling), which would allow for a more comprehensive understanding of how children's relationships affect their development. Based on the nature of relationships, individuals' interdependence undoubtedly fosters conflict, a necessary component of growth and change in social development (Laursen & Pursell, 2009; Valsiner & Cairns, 1992). As such, the following sections discuss the context of conflict in which power arises.

Conflict

Conflict is defined in abstract terms as a mismatch between separated parts, where the resolution is synonymous (Valisner & Cairns, 1992). In concrete terms, conflict is the verbal or behavioural incompatibility in goals that is expressed when one person opposes another person's actions or statements (DeHart, 1999; Shantz, 1987; Vuchinich, 1987). Conflict arises naturally during everyday family processes, and according to Tesla and Dunn (1992), family and friends account for the majority of conflicts during early and middle childhood. Shantz (1987) declares that events causing fights between children mirror those of adults including valued resources, controlling others' behaviours, rule violations, and facts and truth. In addition, family conflict can occur in multiple social domains, including personal, moral, conventional, and prudential (Smetana, 2006; Turiel, 1983, 2006). As such, it is clear that the study of power through conflict is multidimensional; whether the conflict revolves around a parent's concern that their child does not want to eat their vegetables or siblings' dispute over the sharing of a toy, the developmental implications of conflicts are similar, but the process and outcome can be quite different. Children have conflicts over a wide range of issues in differing social domains and use a broad array of strategies to achieve their goals depending on the actors involved, who initiated the opposition, and the issue at hand.

The goal of each person in the conflict is to overcome one another's opposition or resistance. In fact, a small body of literature exists on children's use of power during conflicts with close relationship partners (i.e., siblings, parents), which suggests further study on the topic is warranted. Present evidence indicates that individual's perceptions of power dynamics (Punch, 2005) and type of resolution (Recchia et al., 2010) varies by

relational partner and the specific use of power resources vary by relational partner (Cowan et al., 1984) and social domain (Della Porta & Howe, 2012). Nevertheless, a number of questions remain unanswered, including understanding polyadic conflict.

Polyadic conflict. In many cases conflict begins with a dyadic interaction and then extends into a polyadic conflict, especially in the family home (Howe, Aquan-Assee, & Bukowski, 1997). Family members may enter into a conflict as an active intermediary, attempt to distract the disputants, or interact and then withdraw, which directly influences the character and outcome of the conflict (Vuchinich et al., 1988). In particular, the manner in which the dyad is triangulated not only influences the character and outcome of the conflict, but it may also have long-term implications for children's individual adjustment. With this, one can begin to understand the intricate nature of children's conflicts, especially when a third party intervenes. Although research on polyadic interactions especially within the family is rare, it is important for understanding family functioning and interdependence between its members (Gjerde, 1986; Leaper, Anderson, & Sanders, 1998).

According to theorists such as Piaget (1965) and Sullivan (1953), experience in conflict encourages the development of interpersonal skills (e.g., appreciating the perspectives of others, understanding social rules that govern appropriate behaviour). Taking a cognitive perspective, Piaget (1962, 1973) accounted for differentiation, reorganization, and hierarchical integration of information. To elaborate, the lack of fit between an existing schema and the perceptual challenges of external events and objects develop into conflicts, and it is the resolution of this conflict that encourages learning. In

brief, this theory purports that conflict is needed for a child to operate in concert with others, to cooperate, and foster cognitive development (Shantz, 1987).

A variety of positive developmental outcomes have been identified in the process and resolution of conflict. For instance, conflict between children and their parents has been considered important for the development of self-regulation (Vaughn, Kopp, & Krakow, 1984) and autonomy (Kuczynski, Kochanska, Radke-Yarrow, & Girnius-Brown, 1987). Further, family norms, such as equality and fairness, will develop as children learn about the rights of others, sharing, and reciprocity during conflict (Ross, Filyer, Lollis, Perlman, & Martin, 1994). In turn, children have been found to develop an understanding of moral and conventional rules through conflict with others (Dunn & Munn, 1985). In regard to power, children would be able to learn for instance whether the execution of different types of power would be effective (e.g., lead to resolution in their favour) and that their effectiveness may vary with different partners and social domains.

Social Knowledge

As many theorists state, power is subject to the social realm of bidirectional interactions among individuals (e.g., Foucault, Kritzman, & Sheridan, 1988; French & Raven, 1959; Grieshaber, 2004; Kuczynski, 2003; Wolfe, 1959). Children's construction of social knowledge can thus be understood through the social-cognitive domain perspective (or domain theory; Smetana, 2006; Turiel, 1983, 1998). Under the umbrella of social knowledge acquisition are a variety of domains including: (a) moral, which encompasses concerns for justice, welfare, or rights; (b) conventional issues, involving authority, tradition, or social norms; (c) personal topics, regarding one's privacy, bodily integrity, or control (e.g., choice and preferences), which is an important feature in the

development of autonomy; and (d) prudential issues, consisting of safety, harm, comfort, and health. This suggests that through children's and parents' use of power during family conflict, social expectations and rules in differing social domains can be enforced and learned.

Social domain research has been conducted in regard to differing properties of relationship interactions, such as conflict (e.g., Smetana, 1989), rules and regulations (e.g., Sorkhabi, 2010), disclosure (e.g., Smetana et al., 2009), and conceptions of parental authority (e.g., Smetana & Asquith, 1994; Smetana, 1988). In brief, studies have found that in conflict, parents were perceived to have greater jurisdiction and authority in moral and conventional issues than personal issues (Smetana, 1989; Smetana & Asquith, 1994), which can change with adolescents' age (Smetana, 1988). Both mothers and fathers reported that rules and regulations did not govern issues in the personal domain (Sorkhabi, 2010), and that adolescents disclosed more about prudential and personal than multifaceted issues (Smetana et al., 2009). Although this research is helpful in understanding how different relationship properties, specifically between parents and adolescents, differ by social domain less is known about the differentiation in behavioural patterns across domains in early childhood. Gathering this information can further our understanding of how children's knowledge of the social world develops with age.

The Present Study

Although many researchers have already paved the way for advancing our understanding of conflict, its process and outcome, the focus has generally been on dyadic conflict (i.e., sibling, parent-child; e.g., Hartup & Laursen, 1993; Howe et al., 2002), or the involvement of a parent as the third party in sibling conflict rather than

including any family member as a third party, for example an older sibling becoming involved in parent-younger sibling conflict (e.g., Perlman & Ross, 1997). Yet systems and developmental theorists (e.g., Minuchin, 1985; Sameroff, 1983) argue that theoretically triads, rather than dyads, need to be considered as a basic interaction unit, as individuals not only affect the partner in the dyad through interactions, but may be altered or affect other members of the family unit (Vuchinich et al., 1988). In addition, Eichelsheim, Deković, Buist, and Cook, (2009) mention that empirical progress has been made in describing individual's behaviour in dyadic interactions but to a lesser extent triadic interaction. What is lacking in the conflict literature based on children's relational interactions is the assessment of conflicts involving more than two individuals that takes into account actor's use of power tactics, power effectiveness, and the individual (i.e., age, gender, family role) and conflict contexts (i.e., conflict roles, topic, social domain).

As such, this research focuses on three key issues related to polyadic conflict: (a) the assessment of types of power resources used by different family members; (b) the short-term and long-term effectiveness of power execution by different family members in; and (c) how the conflict context varies based on associations between power, topic, and social domain. Each issue is addressed in a separate manuscript.

In brief, this research revolves around understanding the processes of naturalistic family interactions via a systematic observational analysis. As such, this research targets various aspects of power in family conflict that have not yet been assessed in detail.

Summary of Method

To gain a deeper understanding of the intricacies of power use during family conflict when children are in the early childhood stage, a series of behavioural coding

schemes were applied to transcripts of naturalistic observations of families in their home environment. Participants were originally recruited by Dr. Hildy Ross at the University of Waterloo.

Participants

Families were recruited from a medium-sized industrial city in southwestern Ontario, Canada and included 40 lower and middle class Caucasian families (two siblings; two parents). The recruiting process involved targeting families through advertisements in the local newspaper, contacting preschools, and communicating by word of mouth. Observations were conducted at two time points, when the siblings were 2- and 4-years of age and 4- and 6-years of age. These studies used the time 2 data in which the older children's ages ranged from 5.4 - 7 years ($M = 6.3$ years, $SD = .42$) and the younger children's ages ranged from 3.8 - 4.7 years ($M = 4.4$ years, $SD = .21$); M age gap = 1.94 years, $SD = .28$ (range = 1.4-2.5 years). The sample was reduced to 39 families at Time 2 as one family moved. Parents' age (mothers' $M = 32.8$ years; fathers' $M = 34.6$ years) and educational levels varied: university degree = 29%, college program = 15%, high school diploma = 41%, and no high school diploma = 15%.

Procedure

A female observer, who had previously established stability and rapport with the families, was present during each session to limit the intrusiveness of the observations. During the sessions, the observer followed the children and dictated a descriptive account of all child-child interactions and all parental behaviours that related to the children's interactions onto one track of a tape recorder. On the second track a recording was made of the speech that occurred between family members. Observers did not interact with

family members and responded as little as possible to participants' comments. Children were told not to interact with the observer and generally adjusted easily to being observed. Television, video games, or other major distractions were not allowed.

Most families ($n = 32$) were observed for six 90-minute sessions for a total of nine hours in their home and some for seven sessions ($n = 7$) totaling 241 sessions. The recorded sessions were transcribed using both language and detailed descriptive accounts of the sibling and parent interaction (Ross et al., 1994). Transcriptions included verbal and physical action codes of individual's behaviour towards one another (e.g., take, request action, protest) as well as sequence codes to identify type of interaction (e.g., conflict, contingent activity, pretense) in order to translate the interactions accurately.

Coding of Family (Polyadic) Conflict Sequences

The sequences of conflict were labeled throughout the transcripts by the original data collection team as either a conflict beginning between siblings and turning into family conflict when a parent became involved or beginning with a parent and child and another parent or another child entered the conflict. The original context codes were utilized to identify conflict in the transcripts for the purposes of the present set of studies. Based on the definition of conflict (i.e., the verbal or behavioural incompatibility in goals that was expressed when one person explicitly opposes another person's actions or statements; DeHart, 1999; Shantz, 1987; Vuchinich, 1987), researchers re-read the previously identified conflict sequences to be sure that episodes included interactions of three or more turns and the verbal or nonverbal actions of three or more members in the family. If the conflict involved any reference to the observer or tape recorder that the observer used the conflict was not coded as a naturalistic instance of family conflict. This

process led to a total of 210 polyadic conflict sequences ranging from 3-320 lines with an average of 29 lines per sequence.

Coding of Power

Three behaviour coding schemes were applied to these transcript for the purposes of these studies in order to (a) quantify power behaviours (e.g., Della Porta & Howe, 2012; Dunn & Munn, 1987; French & Raven, 1959; Phinney, 2001; Wang, 2006), (b) to assess power effectiveness (Abuhatoum & Howe, 2013; Ohbuchi & Katnaka, 2001) and (c) to determine conflict context (i.e., actor roles, topic, and social domain (DeHart, 1999; Howe et al., 2002; Ross et al., 1994; Shantz, 1987; Smetana, 1999; Smetana, 2006; Vuchinich et al., 1988)). The coding schemes are found in the Appendix. In terms of coding power resources, a microscopic approach was taken in that each actor's power move was coded. Power effectiveness was assessed by the target's response to each actor's use of power and coded as a successful or unsuccessful power move. The context coding included conflict details, such as topic (e.g., obnoxious behaviour, social rules) and social domain (e.g., moral, conventional). More information regarding each coding scheme is presented with their respective studies.

Use of Power during Family Conflict

Sandra Della Porta, Nina Howe & Hildy Ross

Abstract

Power is a central process of interpersonal relationships (Turner & Schabram, 2012), yet literature on children's use of power during conflict with close relationship partners is minimal. The goal of this study is to identify power behaviours utilized by actors in naturalistic polyadic family conflict interactions and how these behaviours vary by individual (i.e., actor, gender, age) and relationship context (parent-child, sibling). The sample included 210 polyadic family conflict sequences from 35/39 families included in the study (see Ross, Filyer, Lollis, Perlman, & Martin, 1994). Based on French and Raven (1959), family conflict sequences were coded for eight types of power utilized by each actor, including siblings of ages 4- and 6-years-old and their parents. Simple and elaborated information powers were more likely to be used overall during conflict; yet when comparisons were made between actors and by relationship, a different picture was revealed. For example, when comparing power use by parents and children, children were more likely to use coercive and reward power, while parents were more likely to use questioning power. Further, when taking the power behaviours of each actor by relationship, parents and children were more likely to use legitimate, simple and elaborated information, and questioning power towards each other than siblings. These findings provide strong support for the importance of taking the individual and relationship contexts into account when studying children and parents' behaviour in close relationships. This information aids in understanding key aspects of family development in the social environment.

Use of Power during Family Conflict

Bidirectional relations between family members (e.g., parent, sibling) in the social context support the co-constructivist perspective associated with children's successful socialization (Carpendale & Lewis, 2006; Maccoby, 2007). Each partner's expectations of one another develops based on a cumulative history of interactions that become firm and automated, thus creating relational schemas (Laible & Thompson, 2007; Maccoby, 2007). Following this idea, measures of the individual alone are not sufficient to assess development and psychological processes (Hartup & Laursen, 1999); thus to gain a fuller understanding of relationships, it is critical to study the powerful influences of each partner in the social context (Kuczynski & Navara, 2006; Maccoby, 2003).

Although power is a central process of interpersonal relationships (Turner & Schabram, 2012), the literature on children's use of power during conflicts with close relationship partners (i.e., siblings, parents) is minimal. It is known that individuals' perceptions of power dynamics varies by relational partner (Punch, 2005), as does the use of specific power resources (Cowan, Drinkard, & MacGawin, 1984). Further, children actively challenge and negotiate power in the course of conflict (Grieshaber, 1997).

Conflict is a frequent occurrence in family interactions as a result of families' physical proximity, shared tasks, and long-term history (Emery, 1992; Howe, Ross, & Recchia, 2010). The context of family conflict is an excellent context in which to study individuals' use of power resources as each actor in the argument is in a position to use tactics to fight towards a favourable end (Grieshaber, 2004; Kuczynski, 2003). Although researchers have focused on conflict strategies (i.e., aggression, insults, ignoring) in children's dyadic relationships, particularly with siblings (e.g., DeHart, 1999; Howe,

Rinaldi, Jennings, & Petrakos, 2002; Perlman, Garfinkel, & Turrell, 2007; Perlman & Ross, 2005; Shantz, 1987), identification of the types of power resources used by family members in polyadic (i.e., triadic and quadratic) family conflict has received less attention. Thus, the aim of this study was to identify each family member's use of influential behaviours (i.e., power resources) during polyadic conflict interactions, as well as how these behaviours may vary by individual (i.e., actor, gender, age) and relationship context (parent-child, sibling). This information will aid in understanding key aspects of family development in the social environment.

Network of Family Relationships

Each relationship varies based on numerous dimensions, including distribution of power and authority (symmetrical or asymmetrical) and reciprocity (Hartup & Laursen, 1991, 1999; Parke & Buriel, 2006). The parent-child relationship is described as hierarchical where each partner holds different but dependent roles (Dunn, 1993; Hinde, 1979). The parent is seen as having greater knowledge or higher social power while at the same time providing nurturance and support to the child. During the early childhood years, time spent with siblings provides a distinctive context by which social skills can be refined and learning goals can be attained (Hartup, 1989; Hartup & Laursen, 1991; 1999; Parke & Buriel, 2006). Compared to parent-child relationships, sibling relationships involve a more balanced (i.e., reciprocal) distribution of power and nurturance, but the difference in age and developmental characteristics may assign a hierarchical role to one child over the other (Dunn, 1993; Howe et al., 2010).

Although parent-child and sibling relationships are distinct and unique, they share a similar property in that they are both characterized by frequent and various interactions

over time (Collins, 1999). A crucial factor in the reciprocal nature of these familial dyadic exchanges is equal agency, which acknowledges that children and their relational partners each have individual ideas, beliefs, and knowledge about their relationship and can mutually contribute to one another's socialization (Cummings & Schermerhorn, 2003; Pontecorvo, Fasulo, & Sterponi, 2001). This idea is supported by social-constructivist theory, which postulates that children are active learners and cognitively construct their own knowledge about the world via social interactions with others (Carpendale & Lewis, 2006; Piaget, 1971; Vygotsky & Cole, 1978). For instance, using power resources during conflict is one indication of a child's use of their abilities and volition (Kuczynski, 2003). By executing different types of power that influence their relationship partner, through practice and interaction patterns over time, children learn how to solve problems and control their emotions and thought processes.

Power

Social power is defined as the available resources that a person has that can be utilized in order to influence another person (French & Raven, 1959; Raven, Schwarzwald, & Koslowsky, 1998). Adding another dimension to the study of power, Emerson (1962) argued that it is meaningless to say one individual holds power unless it is specified over whom. Hence, power is best considered as a variable that is subject to bidirectional processes in which both partners of a dyad are vulnerable and are capable of influencing one another (Grieshaber, 2004; Lollis & Kuczynski, 1997).

Types of power. The power resources that family members can draw upon during conflict, which can account for the various effects of social influence, include coercive, reward, legitimate, referent, expert, information (simple and elaborated) and questioning

power (Dunn & Munn, 1987; French & Raven, 1959; Phinney, 2001; Wang, 2006).

Coercive power occurs when the recipient expects that they will be punished if they fail to conform to requests. Reward power is defined by a person holding power on the basis of the ability to reward the other. Legitimate power stems from internalized values in the recipient, which dictates that the person in power has an inherent right to influence behaviour by the laws, customs, and practices evident in a particular culture. Referent power is based on identification with a specific person. Expert power is granted on the basis of one individual having advanced knowledge within a particular domain.

Information power is based on one's ability to persuade another person by using logic and reasoning, which can be divided into two levels: simple information, defined as a demand without explanation, and elaborated information, defined as providing reasons, explanations, or justification about one's own or another's behaviour. Elaborated information includes five kinds of justifications, namely references to actions, feelings, social/house rules, consequences, and object attributes. Finally, the use of questioning as a means to exert power in verbal interaction encompasses three classes of questions: yes/no clarification, "wh" questions (e.g., when, where, why) and alternative questions, where one would expect one reply to two or more options presented in the question.

Power in the Family

Considering that child-parent and child-sibling relationships are both complex and multidimensional, the process of power in each relationship may differ (Dunn, 1993).

Traditional hierarchical conceptions of power asymmetry in the parent-child relationship have been viewed as static, primarily emphasizing that parents have more power than children (Emerson, 1962). However, this assumption does not reflect actual use of power

in everyday family life; rather, different types of power reside in both parents and children (Kuczynski, 2003).

In research on mothers' and children's perceptions of power, the most common type of power perceived to be used by children was legitimate power, whereas mothers were perceived to use more coercion and information power (Della Porta & Howe, 2012). In addition, parents' and children's perceptions of their own and their partners' conflict behaviours varied: parents reported that they use more reasoning strategies than children, and parents reported that children use more verbal aggression towards their parents than children report (Rinaldi & Howe, 2003). Not only does each partner vary in his or her report of types of power used, but perceptions of power behaviours differed based on the actor and partner involved in the interaction. In sibling relationships, power is more symmetrical due to the children's similar developmental stage, but may also be asymmetrical based on birth order and the age gap between siblings. Both siblings in a dyad rarely executed expert, reward, and referent power during observed sibling conflict during a play session, while coercive, legitimate and information power were used more often (Abuhatoum & Howe, 2013).

Furthermore, Furman and Buhrmester (1985) suggest that studying children's relationships from the comparative point of view can aid in the integration of different bodies of literature (i.e., parent-child and sibling); this allows for a more comprehensive understanding of how children's personal relationships affect their development.

Conflict

Conflict is defined as the verbal or behavioural incompatibility in goals that is expressed when one person explicitly opposes another person's actions or statements

(DeHart, 1999; Shantz, 1987; Vuchinich, 1987). Perlman and Ross (1997) argue that children first encounter conflict within the family and it is the most frequent context for conflict. Family conflict is quite intricate because it can involve two (i.e., siblings, parents) or more family members (mother and siblings or both parents and children).

Polyadic conflict involving three or more parties is qualitatively different than dyadic conflicts. Specifically, a third party can enter as an active intermediary, or can attempt to distract the disputants from their disagreement adding to the complexity of the conflict process (Vuchinich, Emery, & Cassidy, 1988). For instance, sibling interaction during conflict differs depending on the mother's presence or absence (Howe, Fiorentino, & Garipey, 2003). Not only do family members frequently join dyadic conflict, but they must attend to the relationship they have with each partner and the role each partner takes on during the conflict (Lindsey & Caldera, 2006). Although research on polyadic family interactions is rare, it is important for understanding family functioning and interdependence between members (Gjerde, 1986; Leaper, Anderson, & Sanders, 1998).

Power and Conflict

Research on power in children's close relationships is limited, perhaps due to the ways in which the term has been utilized. Specifically, the concept of power is frequently defined as existing on one end of the spectrum of influence, using terms such as coercion, dominance and submission, or status (Emerson, 1962; Perlman, Siddiqui, Ram & Ross, 2000). Within this narrow view of the construct of power, many studies have conceptualized power as high control and coercion (e.g., Bugental, 1993), abuse or aggression (e.g., Bugental & Shennum, 2002), and violence (e.g., Handwerker, 1996). Only a handful of studies have defined power in terms of specific resources used to

influence another person in a close relationship (e.g., Abuhatoum & Howe, 2013; Della Porta & Howe, 2012).

During conflict, an individual's execution of power in the family may vary based on certain characteristics, such as birth order (i.e., older vs. younger sibling) and family role (i.e., mother or child) (Abramovitch, Corter, & Lando, 1979). For example, in the sibling relationship, older children contribute more frequently to conflict discussions than younger siblings (Ross, Ross, Stein, & Trabasso, 2006). In particular, older children use more physical and verbal aggression and threats, whereas younger siblings are more likely to cry during conflict (Martin & Ross, 1995). Accounting for gender, boys tend to use more physical aggression than girls and girls tend to use more informational and affective control than boys (Abramovitch et al., 1979; Vuchinich, 1984).

During dyadic and triadic conflicts different relationship partners may employ a variety of power tactics. More notably, differences in relationship properties give rise to variation in power behaviours during conflict (Laursen & Pursell, 2009). Specifically, parents naturally have greater entitlements than children, but the range of entitlements can be expanded or contracted based on the power efforts of children (Emery, 1992).

Research on use of power in social relationships indicate an effect of target (mother, father, same-sex friend), where friends differed from both parental targets in receiving fewer unilateral (i.e., strategies in which the agent's actions were independent of the target) and indirect (i.e., positive effect, negative effect, manipulation) strategies during conflict (Cowan et al., 1984). Weaker strategies (e.g., begging, pleading, use of an advocate) were used more with parents whereas stronger strategies (e.g., assertive, demanding) were employed more often with friends, perhaps indicating that children

operate from a position of relative powerlessness with regard to parents. These results support the idea that children may use different power resources depending on the partner (e.g., friend or parent). Comparing across generations, children perceive a stronger imbalance of power with parents and to a lesser extent with their sibling (Punch, 2005). Children also can assert power over an adult, which supports the view of children as active agents who can choose to resist or comply to parental demands (Kuczynski & Kochanska, 1990; Kuczynski, Kochanska, Radke-Yarrow, & Ginius-Brown, 1987).

The Present Study

Individual family dyadic subsystems (sibling, parent-child relationships) vary in their conflict dynamics based on existing sources of power. Family systems and developmental theorists (e.g., Minuchin, 1985; Sameroff, 1983) argue that triads, rather than dyads, should be considered as a basic interaction unit; individuals not only affect the partner in the dyad through interactions, but may impact other members of the family unit (Vuchinich et al., 1988). Although empirical progress has been made in describing individuals' behaviour in dyadic interactions, less attention has been devoted to triadic interactions (Eichelsheim, Deković, Buist, & Cook, 2009).

Following these arguments, the aim of this study was to conduct an in-depth examination of the overall use of family power resources and to assess how executions of power vary by individual and relationship contexts. This was accomplished by identifying sequences of polyadic family conflict in transcripts of ongoing naturalistic interactions collected in the home setting (Ross, Filyer, Lollis, Perlman, & Martin, 1994). The following research questions were posed: (a) What type of power is used most often in polyadic family conflict? (b) Does power use vary by family role (i.e., parent-child),

and by age/birth order and gender when comparing older and younger siblings? (c) Does use of power vary by relationship (i.e., parent-child, sibling) or actor-partner combination (i.e., parent to child, child to parent, or child to child)? Based on the literature, the following hypotheses are posited for the first two questions: (a) Family members will utilize coercive, legitimate and simple and elaborated information power more than reward, expert, referent, and question power (Abuhatoum & Howe, 2012); (b) Children will utilize more legitimate power towards their parents, while parents will use more coercive and simple and elaborated information power towards their children (Della Porta & Howe, 2012; Rinaldi & Howe, 2003); (c) Older siblings will execute more power overall (Ross et al., 2006) and when comparing birth order, older siblings will use more coercion (Abramovitch et al., 1979; Abuhatoum & Howe, 2013), while younger siblings will use more reward power (Martin & Ross, 1995); (d) In regard to gender, boys will use more coercion than girls, while girls will use more information power than boys (Abramovitch et al., 1979; Vuchinich, 1984). The last question regarding variations in relationships is exploratory considering the lack of research on power differentials across relationships and actor-target combinations in polyadic family conflict.

Method

Participants

This project utilized previously collected data of families interacting naturally in their home environment (see Ross et al., 1994). Families were recruited from a medium-sized industrial city in southwestern Ontario, Canada and included 40 lower and middle class Caucasian families (two siblings; two parents). The recruiting process involved targeting families through advertisements in the local newspaper, contacting preschools,

and communicating by word of mouth. Observations were conducted at two time points, when the siblings were 2- and 4-years of age and 4- and 6-years of age. The present study used only the time 2 data in which the older children's ages ranged from 5.4 - 7 years ($M = 6.3$ years, $SD = .42$) and the younger children's ages ranged from 3.8 - 4.7 years ($M = 4.4$ years, $SD = .21$); M age gap = 1.94 years, $SD = .28$ (range = 1.4-2.5 years). The sample was reduced to 39 families at Time 2 as one family moved. Parents' age (mothers' $M = 32.8$ years; fathers' $M = 34.6$ years) and educational levels varied: university degree = 29%, college program = 15%, high school diploma = 41%, and no high school diploma = 15%.

Procedure

For stability and rapport, two female observers were assigned to each family, although only one observer was present during each session to limit the intrusiveness of the observations. During the sessions, the observer followed the children and dictated a descriptive account of all child-child interactions and all parental behaviours that related to the children's interactions onto one track of a stereo tape recorder. On the second track a recording was made of the speech that occurred between family members. Observers did not interact with family members and responded as little as possible to participants' comments. Children were told not to interact with the observer and generally adjusted easily to being observed. Television, video games, or other major distractions were not allowed.

Most families ($n = 32$) were observed for six 90-minute sessions for a total of nine hours in their home, while some were observed for seven sessions ($n = 7$) for a total of 241 sessions. The recorded sessions were transcribed using language and detailed

descriptive accounts of the sibling and parent interaction (Ross et al., 1994). Transcriptions included verbal and physical action codes of individuals' behaviour towards one another (e.g., take, request action, protest) in order to translate the interactions accurately. In addition, the content of the speech that family members directed to one another and a description of their actions (i.e., moves) accompanied the coding of the interaction. Reliability on ten 20-minute observations was established with a percent agreement for the presence of each coded action (86%), each actor (88%), as well as the context for sequences of interaction (95%).

Conflict Sequence Identification

Conflict was defined as the verbal or behavioural incompatibility in goals that is expressed when one person explicitly opposes another person's actions or statements (DeHart, 1999; Shantz, 1987; Vuchinich, 1987). Analogous to this definition, original coding of the transcripts identified sequences of conflict initiated between siblings and between the parent and child (Ross et al., 1994).

Context categories (e.g., game, pretense, conflict) were coded by the original research team with a *kappa* value of .91 (Perlman et al., 2007). These were used to identify polyadic conflicts in the transcripts (i.e., instances where siblings initiated and a parent became involved or when a parent and child began the argument and a third party entered). The sequences were then reviewed and those matching our criteria were used for this project; sequences included a minimum of three or more conversational turns and the verbal or nonverbal actions of three or more members in the family. Conflict sequences were excluded when the conflict involved any reference to the observer or tape recorder or if there were three parties involved but each party did not make a volitional

contribution. In total, there were 210 family conflict sequences identified ranging from 3-320 lines ($M = 29$ lines per sequence).

Coding

The coding process used to identify power resources executed by each family member during conflict took a microscopic approach. In particular, each actor's influential power behaviour was coded based on their verbal and nonverbal moves (Howe et al., 2005). Power behaviours were based on French and Raven's (1959) typology, but the information category was refined to include simple and elaborated information (Dunn & Munn, 1987; Phinney, 2001) and the category of questioning as a means of exerting power was added (Wang, 2006). See Table 1 for definitions and examples.

Power codes were not mutually exclusive in that multiple power resources may have been used in each move. Also, instances of speech that were unrelated to the conflict or did not present influential power behaviours were not coded as part of the sequence (Della Porta & Howe, 2012; French & Raven, 1959). Reliability based on 20% of the sequences ($n = 42/210$) was obtained and resulted in the following *kappas*: coercion = .91; reward = .99; referent = 1.00; legitimate = .77; expert = 1.00; simple information = .80; elaborated information = .86; questioning = .91.

Results

Analyses regarding overall power use in polyadic family conflict, variation in power use by family role (i.e., parent, child), relationship (e.g., sibling), and actor-target combinations (i.e., parent to child, child to child, child to parent) are presented. The family was the unit of analysis, thus probability scores were calculated for each analysis. Descriptive statistics for overall power use and use of power by actor are presented in

Table 2. ANOVAs and repeated measures ANOVAs using pairwise comparisons with the Bonferroni correction were executed. The analyses did not include two types of power due to its infrequent use by actors (i.e., referent and expert power).

Descriptive Statistics

In 35/39 families, 210 polyadic conflict sequences were identified and of these sequences, there were 169 3-party (mother with two children = 108; father with two children = 37; mother and father with one child = 24) and 44 4-party (mother, father and two children) conflict sequences. The average moves per actor per conflict sequence were as follows: mother = 7.42, father = 3.09, older sibling = 6.58, and younger sibling = 5.86. Mothers and fathers were collapsed into a parental category as the father was half as active as the mother and was not present in all of the sessions. In terms of birth order and gender, no significant interactions were displayed, counter to expectations (see Table 3).

Overall Use of Power

A repeated measures ANOVA was used to compare the six types of power, in which each type of power was proportionalized relative to the total use of power (i.e., coercive power/total use of power). A significant difference in the type of power used overall in family conflict supported the hypothesis, $F(5, 30) = 24.81, p < .001, \eta^2 = .80$. Simple ($M = .26; SE = .02$) and elaborated information power ($M = .27; SE = .02$) were more likely to be used during conflict, followed by coercive ($M = .16; SE = .02$) and legitimate power ($M = .13; SE = .01$), while the types of power that were least likely to be utilized were reward power ($M = .08; SE = .01$) and questioning ($M = .10; SE = .01$).

Power by Actor Role

To test the hypothesis that children would utilize more legitimate power than parents, while parents would use more coercive and simple and elaborated information power towards their children, proportion scores were calculated by dividing parents' use of power by all instances of that type of power (i.e., parent coercive power/parent coercive power + child coercive power). A 2 (actor) by 6 (power) repeated measures ANOVA revealed a significant interaction, $F(5, 24) = 29.83, p < .001, \eta^2 = .86$ that was contrary to expectations. Simple effect tests indicated that children were more likely to use coercive ($M = .66; SE = .04$) and reward ($M = .91; SE = .03$) power than parents ($M = .34; SE = .04; M = .09; SE = .03$, respectively), while parents were more likely to use questioning power ($M = .71; SE = .05$) than children ($M = .29; SE = .05$) during conflict.

Power by Relationship

The comparison between parent-child and siblings' power use was exploratory. To create scores for the use of power between relationships, data were proportionalized by taking the use of power between parents and children and dividing by the total use of power between actors (i.e., parent and child coercion/(parent and child coercion + sibling coercion)). After conducting a 2 (relationship) by 6 (power) repeated measures ANOVA, the interaction, $F(3.08, 86.12) = 20.64, p < .001, \eta^2 = .42$, indicated that Mauchly's test of sphericity was violated, $\chi^2(14) = 41.19, p < .001$, therefore the degrees of freedom were corrected using Greenhouse-Geisser estimates ($\epsilon = .62$). Simple effect tests showed that in the parent-child relationship, parents were more likely to use legitimate, simple and elaborated information, and questioning power than siblings. The magnitude of difference

in power use across both relationships was greater for legitimacy, elaborated information, and questioning than simple information power (See Table 4).

Power by Actor-Target Combinations

A 3 (actor-target) by 6 (power) repeated measures ANOVA was utilized to assess the variability in power used by actor-target combinations, if any. This analysis required proportion scores to be calculated for each type of power in relation to its use by each actor-target combination (e.g., parent to child coercion/(parent to child coercion + child to child coercion + child to parent coercion)). Mauchly's test of sphericity was violated for the interaction, $\chi^2(54) = 88.54, p < .01$, thus the degrees of freedom were corrected using Greenhouse-Geisser estimates ($\epsilon = .60$). The interaction between actor-target combination and type of power was significant, $F(5.98, 167.50) = 23.35, p < .001, \eta^2 = .46$. Simple effect comparisons (see Table 5) showed that coercive power was more likely to be used by the parent towards their child and by the child towards their sibling as compared to the child towards their parent. Reward power was more likely to be executed by the child towards their sibling and to their parent than by the parent towards their child. Legitimate, simple information, and questioning power were more likely to be used by the parent towards their child than the child towards their sibling or their parent. Finally, elaborated power was more likely to be used by the parent towards their child and child towards their parent than the child towards their sibling.

Discussion

The overarching goal of this study was to assess parents' and children's existing interactional schemas (Laible & Thompson, 2007; Maccoby, 2007) during the process of conflict (i.e., use of power) as it was revealed through naturally occurring polyadic

conflict sequences in the home setting. As Ross, Cheyne, and Lollis (1988) point out, the obtainment of knowledge of the basic units of social interaction (i.e., actor, action, and target) is sufficient and necessary when studying relationships. As such, we identified details of the conflict process in the family, including overall use of power, power as it varies by individual context (i.e., actor role, birth order, gender), as well as power variation by relationship context (i.e., relationship type, actor-target combinations).

Overall Use of Power

First, it was important to attain a sense of family members' ability to influence other members using power resources during polyadic conflict. The hypothesis that family members would utilize coercive, legitimate, and simple and elaborated information power more than reward, expert, referent, and question power was confirmed, which supports Abuhatum and Howe (2012). However, the magnitude of difference between types of power was revealed in that simple and elaborated information power were more likely to be used than coercive and legitimate power, which in turn were all more likely to be referenced than reward and questioning power.

Regardless of the actor or target involved in the execution of conflict, it is apparent that simple and elaborated information power (Phinney, 2001) would be utilized most often in the family unit. Simple information power involved the use of a refuting statement (e.g., "I didn't do it") or a simple demand (e.g., "don't do that") to influence another person. This type of power is revealed through the primary mode of communication, language, which is the core of social interaction, and thus its frequency of use as compared to other types of power is clear (Demol & Buysse, 2008). In addition, it is possible that young families are apt to utilize these basic language skills based on the

age and comprehension abilities of the children involved.

Elaborated information was conceptualized as socially independent in contrast to other types of power, which are socially dependent (Raven, 1993). For instance, one's use of elaborated information (e.g., "the longer you wait, the colder your food will get and the worse it will taste") as a type of influence would be accepted by the target based on the knowledge provided rather than it being accepted based on the actor's position or status, behaviour, or intent. In this sense, it would be a socially independent type of power. The target's change in behaviour in response to use of information would be inconsequential as opposed to coercion (threat), reward (incentive), legitimacy (position or right), or question (leading), which may involve an underlying tone or expectation of compliance, hence being socially dependent. The execution of other types of power is therefore likely to vary based on the social dependence of the target to the actor.

Coercion and legitimacy were the second most utilized types of power in family conflict. Coercion included a threat (e.g., "if you keep this up you won't go outside") or use of force (e.g., child grabs a toy from their parent's possession). This type of power was less likely to be used than information power, which is in line with research on children's naturalistic conflicts with peers in that they used verbal assertion more often than physical assertiveness (Williams & Schaller, 1993). In addition, both parents and children have access to coercive power and may find it useful when in conflict. Legitimate power had a similar likelihood of being utilized in family conflict and was executed in regard to authority (e.g., "get over there and apologize now"), moral principle (e.g., "fair's fair") or preference (e.g., "I have to have a chair"). This type of power may be used more frequently than reward and questioning power as it reflects one's ability to

fight for the rights of the individual (i.e., mother as authority or the child as an autonomous being) or societal customs (i.e., promoting a sense morality).

These findings reflect members' constructed conflict process schemas where actors have learned to employ behaviours based on previous encounters with their partner's response to behaviours (i.e., more frequently when they are reinforced and less frequently when they are discouraged; Hargie & Dickson, 2004). This social constructivist perspective denotes which types of powers have received positive feedback in the family (Carpendale & Lewis, 2006; Piaget, 1971; Vygotsky & Cole, 1978).

Power Variation by Individual Context

Although power is a bidirectional process where one cannot wield power unless it is directed at another, one's inherent characteristics, whether it is family role (i.e., parent or child), age, or gender can vary regardless of the target. Thus, when studying children's social relationships it is important to understand what types of power are used depending on the actor's inherent attributes.

Power by actor role. The expectation that children would utilize more legitimate power than parents, while parents would use more coercive, simple information, and elaborated information power than children based on Della Porta and Howe (2012) was not supported. Interestingly, coercive (physical force or verbal threat) and reward (whining or crying) power were more likely to be used by children than parents, while questioning power was more likely to be a parental strategy. The hypothesis was generated based on a study of perceptions of power during conflict between parents and children in middle childhood, thus the differences in findings may be a result of methodological differences (interview vs. observations) and the differing ages of the

children (Kuczynski, 2003). These findings support the idea that power behaviours utilized by parents and children in dyadic conflict may vary when an additional party (i.e., another parent or child) is involved changing the context of conflict (Kuczynski, 2003, Vuchinich, et al., 1988), which is a speculation warranting further study.

Previous research demonstrated that children perceive that they exert more self-discipline and are more likely to behave when their parents are present than when alone with their sibling (Punch, 2005). This suggests that what is perceived as acceptable behaviour between siblings is perhaps not appropriate when parents are present. Also, older children in the Della Porta and Howe (2012) study responded to hypothetical conflict scenarios in which the actors may have been calmer and able to express their thoughts in a more sophisticated fashion compared to during ongoing naturalistic conflicts. That is, in the interview children may have discussed their legitimate rights as opposed to drawing on less sophisticated behaviours in the moment such as coercive and reward power. Finally, parents may have expressed their behaviours during conflict differently in the interviews, due to social desirability, where explanations (i.e., information power) may have been perceived as more appropriate, but when in the process of ongoing naturalistic conflict, parents may rely on questioning as a more effective strategy.

Specific to the present study, children's use of coercive power was representative of destructive conflict resolution behaviour (Katz, Wilson, & Gottman, 1999; Rinaldi & Howe, 1998) and reward power (typically in the form of negative reinforcement) as a distracter and attention grabber of adult partners (Chang & Thompson, 2010; Sokol, Webster, Thompson, & Stevens, 2005). These two methods of influence may be salient to

children since they require less sophisticated cognitive skills and abilities (Kuczynski, 2003; Rinaldi & Howe, 2003). Moreover, parents may have responded immediately to such behaviours allowing the child to learn that these methods can be effective, which also reflects the bidirectionality of familial interactions in that the partner's response can influence the actor's future behaviours (Chang & Thompson, 2010; Grieshaber, 2004; Lollis & Kuczynski, 1997).

Future research can take this point even further by assessing power effectiveness based on the partner's response. For instance, when a child utilizes negative reward (i.e., cries or whines) or other power tactics (i.e., threat or information) as an attempt to control another, researchers can measure the target changes in behaviour (i.e., success of the actor's power behaviour). This can also be addressed by assessing how this pattern affects the resolution of conflict and also by studying the difference in conflict processes based on the topic or social domain.

Use of questioning power by parents reflects a method of control that in fact has been identified as "one of the most powerful tools in communication" (Hawkins & Power, 1999, p. 235). According to Hargie and Dickson (2004), a question can be posed in the form of an interrogation (e.g., "What were you told about that?") or that semantically expresses a request for information, usually expecting the listener to gain an awareness of what was asked (e.g., "That belongs to Andrew doesn't it?") or an intent to make a point (e.g., "How does Daddy feel about being blackmailed like that?"). The implication of using this type of power is that parents can use their position as the questioner to create a situation where the listener is expected to reply or comply, thus placing the parent at a higher level of authority than the child (Hargie & Dickson, 2004).

Along the same lines, parents have not only more experience but also have greater cognitive sophistication. Parents are able to maneuver through conflict with their children in a way that allows children to become aware of the situation or be confronted about different factors involved in the conflict (e.g., help children to understand that taking another child's toy without asking is morally wrong). Metacognitive questioning is a term that can be viewed as analogous to this point (Thompson & Williams, 2009), in which parents may use questions in discourse that scaffold children's intellectual development. This process is also referred to by psycholinguists as queries that direct children to realizing or expressing their knowledge about states of mind (e.g., Bates, 1976; Ely, Berko, Gleason, MacGibbon, & Zaretsky, 2001). Depending on the question, parents can guide children towards the awareness of their own knowledge or lack thereof and assess their own discourse, strategies, and past actions (Hargie & Dickson, 2004; Thompson & Williams, 2009). This can contribute to the learning of problem-solving and decision-making strategies.

Power by sibling birth order. In terms of identifying overall power use by siblings as well as the variability of types of power used, it was anticipated that older siblings would execute more power overall and use more coercion, while younger siblings would use more reward power (Abramovitch et al., 1979; Martin & Ross, 1995; Ross et al., 2006). Results did not support either expectation. In the context of polyadic conflicts where a parent or two are present, older and younger siblings may express similar types of power due to their overall position in the family hierarchy. This may have occurred in contrast to the context of dyadic sibling conflict as children may perceive certain behaviours as acceptable between themselves, but less so with parents

(Punch, 2005). Although power behaviours did not vary by birth order, it is possible that power relations change over time. As such, by assessing the change in power behaviours in the family over time, we can further understand changes in children's agentic behaviour as well as parents' power strategies utilized towards their children at certain developmental stages (Maccoby, Kahn, & Everett, 1984). These can act as guiding questions for future research.

Power by gender. In regard to gender, boys were expected to use more coercion than girls and girls to employ more information power than boys (Abramovitch et al., 1979; Vuchinich, 1984). Instead, findings revealed that boys and girls used the same proportion of each type of power during conflict. This may reflect the similarity in children's behaviour at this age and their breadth of experiences with relationship partners (Punch, 2005).

Power Variation by Relationship Context

Although children's social relationships are composed of differing interactions (Hartup & Laursen, 1991; 1999), the present research advances our knowledge regarding parent-child and sibling interactions during polyadic family conflict.

Power by relationship. To understand the differences in the interactional processes between parent-child and sibling relationships, it is imperative to learn how power operates (Punch, 2005). Our research revealed that in the parent-child relationship, actors were more likely to use legitimate, simple and elaborated information, and questioning power than in the sibling relationship. Upon further inquiry, the magnitude of difference in power use across both relationships was greater for legitimacy, elaborated information, and questioning than simple information power. Although actors overall

used simple and elaborated information followed by coercive and legitimate power, using reward and questioning power the least, once dyadic relationship interactions were parsed, it was clear that power relations varied by relationship context.

The nature of power relations indicate that parents and children use certain types of power in their interactions during polyadic conflict more than children use with their sibling. The use of legitimate power reveals that each partner was accessing their rights as dictated by family roles and/or society, whether it was parents using their authority (e.g., “you start cleaning up and Jen, you come back here now”) or moral principles (e.g., “hurting people is wrong”) or children referring to moral principles (e.g., “no fair, I had it first) or preferences (e.g., “I need that stick to make a star”). Parents’ and children’s use of simple information (e.g., “put it back”; “please give me the apple”), elaborated information (e.g., “you already have those other books”), and questioning (e.g., “Why did you do that to him?”) may indicate that parents’ constructive power behaviours are being reciprocated by children (Rinaldi & Howe, 2003). In the relationship, children’s less sophisticated, deconstructive power behaviours (Rinaldi & Howe, 2003), such as coercive and reward power, may be reciprocated between children. Differences in relationship properties, where the parent-child relationship is vertical and the sibling relationship is horizontal in nature, may give rise to variation in power behaviours utilized during conflict (Laursen & Pursell, 2009).

Power by actor-target combinations. A comparison between actor-target combinations (i.e., parent to child, child to parent, child to child) revealed that type of power utilized by each actor varied based on the target to whom the power was directed.

First, coercive power was used more by the parent towards their child and by the child towards their sibling compared to the child towards their parent. Coercive power (i.e., physical force or verbal threat) can reflect the actor's position in an actor-target combination. For instance, parents may utilize their inherent role and hierarchical status and children may use coercion in a reciprocal fashion towards their sibling (Dunn, 1993; Hinde, 1979). When taking actor-partner context into account, the likelihood of children, who are in an inferior social position to their parents (Punch 2005), using force or threat was low as expressed in their daily conflict interactions in the home. Future research can compare these findings based on a normative population to interactions between family members of children from a clinical population.

Reward power was more likely to be expressed by the child towards their sibling and their parent than by the parent towards their child. As mentioned earlier, most of the reward power utilized by children was in the form of negative reinforcement, specifically whining or crying. This type of behaviour is first evident when a child starts to become linguistically competent and uses high-pitched vocal behaviours along with speech to make a request, a complaint, or display dissatisfaction (Chang & Thompson, 2010). Apparently, children used this method of power towards either target (sibling or parent) rather than the parent towards the child.

Legitimate, simple information, and questioning power were more likely to be used by the parent towards their child than by the other two actor-target combinations. Similar to the previous results by relationship, the parent-child relationship facilitated the use of these three types of power as well as elaborated information power. However, in this analysis, these types of power were utilized more by the parent towards the child than

vice versa. In addition, elaborated information power was more likely to be used by the parent towards their child and child towards their parent than between siblings. These findings provide a more nuanced understanding of whether both actors in the parent-child relationship reciprocate these four types of power more than in the sibling relationship. Specifically, we can see that elaborated information was the only type of power in the parent-child relationships that was reciprocated by both partners, perhaps highlighting that parents and children are more constructive in the process of conflict with each other by utilizing this sophisticated influential behaviour (Rinaldi & Howe, 2003). Also, parents may be modeling this type of positive conflict behaviour to allow children to understand and imitate appropriate conflict resolution behaviour (Phinney, 2001).

Conclusion

Limitations of this study include the small sample size affecting the statistical power of the results and generalizability of the findings due to the lack of multicultural representation. Yet, this study sets a strong stage of research in parents' and children's agency by beginning to unfold the intricacies of power dynamics within polyadic family conflict during naturalistic home observations. Our findings reveal the relational schemas created by past interactions between family members. Most notably, we provide support for the notion that assessing the behaviours of individuals alone does not reveal the most realistic aspects of social interaction (Hartup & Laursen, 1999). Rather, in order to understand children's socialization within the family system, one must consider children's behaviours in the context of the family, which includes both dyadic and polyadic interactions (Kuczynski & Navara, 2006; Maccoby, 2003).

We began by understanding the overall use of power during family conflict and funneled down to a more detailed look at power by actor-target combinations. Our findings provide strong support for the importance of taking the individual and relationship contexts into account when studying children and parents' behaviour in close relationships. Building such a research program can be crucial to gaining an even deeper comprehension of agency, power and conflict in family functioning.

In conclusion, we provide a novel look at children's agency within the family as children develop methods of controlling their environment along with understanding the perspective of others and are then able to work in tandem with others' activities (i.e., parent and siblings). With this information, parents, educators, and clinicians can develop a clearer understanding of power executed in children's close relationships.

Table 1

Definitions and Examples of Power Coding Scheme

Type of Power	Sub-Categories	Definition	Example
Coercive	Physical	Use of physical coercion/force	Push, take
	Verbal/non-verbal	Verbal/nonverbal threats	“I’m gonna throw Snuffleupagus”
Reward	Positive	Use of positive conditions towards desired outcome	“You could win all the marbles if you play”
	Negative	Use of negative conditions towards desired outcome	Whining, begging
Legitimate	Moral Principle	Defending the rights of yourself or another person	“No fair”; “Hurting people is wrong”
	Authority	Using rights of social hierarchy or belief that authorities are to be obeyed	“You have to put the crayons back right now”
	Preference	Having the right or opportunity to choose or assert one’s desire	“I need that stick to make a star”; “I don’t want it”
Referent		Ability to influence others because with respect, admiration, or likability	“I wish you weren’t my mommy”
Expert		Refers to one’s superior knowledge or ability	“This is how you it. mom told me”
Information	Simple	An instance of a demand without explanation	“Give me the guy”
	Elaborated	Using behaviour or feelings, social rules, consequences or object as justification	“I can’t drink this hot chocolate, it’s too unpleasure”
Questioning		Includes affirmation, when, where, why, and alternative questions	“Why did you do that?”; “Who wrecked the tower?”

Table 2

Descriptive Statistics

	Overall	Parent	Older	Younger
	<i>M (SE)</i>	<i>M (SE)</i>	<i>M (SE)</i>	<i>M (SE)</i>
Coercive	24.60 (26.49)	7.89 (9.93)	9.14 (10.26)	6.89 (8.20)
Reward	13.43 (17.63)	1.06 (2.06)	4.11 (5.96)	8.28 (11.38)
Referent	1.09 (1.37)	0.09 (.28)	0.20 (.83)	0.06 (.34)
Legitimate	19.60 (19.93)	10.54 (11.70)	7.23 (9.41)	4.03 (4.65)
Expert	2.88 (2.90)	0.26 (.78)	0.40 (1.24)	0.06 (.24)
Simple Information	36.94 (44.35)	18.57 (23.85)	9.49 (11.92)	7.11 (8.08)
Elaborated Information	38.20 (42.05)	17.14 (23.85)	11.31 (13.13)	9.20 (12.60)
Questioning	14.34 (18.24)	10.71 (14.26)	2.14 (3.05)	1.54 (2.55)

Note: Means and standard deviations are based on the total identified types of power per conflict sequence. Referent and expert power were excluded from analysis due to their infrequent use.

Table 3

Simple Effects for Type of Power by Gender

Power Type	Gender	
	Female	Male
	<i>M (SE)</i>	<i>M (SE)</i>
Coercive	.43 (.06)	.57 (.06)
Reward	.52 (.07)	.48 (.07)
Legitimate	.52 (.07)	.48 (.07)
Simple Information	.45 (.07)	.55 (.07)
Elaborated Information	.50 (.06)	.50 (.06)
Questioning	.52 (.07)	.48 (.07)

Table 4

Simple Effects for Type of Power by Relationship

Power Type	Relationship	
	Parent-Child	Sibling
	<i>M (SE)</i>	<i>M (SE)</i>
Coercive	.53 (.04)	.47 (.04)
Reward	.60 (.06)	.40 (.06)
Legitimate	.81 (.04) ^a	.19 (.04) ^a
Simple Information	.77 (.03) ^a	.23 (.03) ^a
Elaborated Information	.81 (.03) ^a	.19 (.03) ^a
Questioning	.91 (.04) ^a	.09 (.04) ^a

All $p < .01$

Note. Superscript letters represent where the significant differences lie between parent-child and siblings' use of power (e.g., "a" is significantly different than "a").

Table 5

Simple Effects for Type of Power by Actor-target Combination

Power Type	Actor-Target <i>M</i> (<i>SE</i>)		
	Parent to Child	Child to Child	Child to Parent
Coercive	.34 (.04) ^a	.48 (.04) ^b	.18 (.03) ^{ab}
Reward	.09 (.03) ^{ab}	.40 (.06) ^a	.51 (.06) ^b
Legitimate	.49 (.04) ^{ab}	.19 (.04) ^a	.32 (.03) ^b
Simple Information	.50 (.03) ^{ab}	.23 (.03) ^a	.27 (.03) ^b
Elaborated Information	.48 (.04) ^a	.18 (.03) ^{ab}	.34 (.03) ^b
Questioning	.71 (.05) ^{ab}	.09 (.04) ^a	.20 (.04) ^b

All $p < .05$

Note. Superscript letters represent where the significant differences lie between actor-target combinations for each type of power (e.g., “a” is significantly different than “a”).

The Distinction between Power Use and Power Effectiveness

The first study identified the use of power utilized by each family member during polyadic conflict interactions and assessed how these behaviours varied by actor, relationship, and actor-target combinations. The findings extend recent work on power in young children's social relationships (Abuhatoum & Howe, 2013; Della Porta & Howe, 2012; Recchia, Ross, & Vickar, 2010) by analyzing it in the complex context of polyadic family conflict. This information aids in our understanding of the nature of children's early development in the informal setting of the family, a core context for children's social development.

We have identified key elements of how families co-construct knowledge and create schemas of social interaction (Carpendale & Lewis, 2006; Laible & Thompson, 2007; Maccoby, 2007). Specifically, we found that power does vary by actor, relationship, and actor-target combinations, which not only supports the complex nature of children's interactions, but also builds knowledge on power interactions during polyadic conflict. Although building knowledge on the varied nature of power in family interactions is essential, it is also important to note that use of power and effective use of power are distinct conceptions. The execution of power reveals details about what resources each actor in the family utilizes to obtain their relative goals; however, obtaining data on each family member's ability to be effective in influencing other members using power resources provides an even more sophisticated understanding of polyadic family conflict.

Therefore, the second study aimed to gain knowledge about power effectiveness taking into account the target's response to an actor's influential power behaviour move.

This study will allow for our understanding of which tactics are effective as well as who is more effective using what tactics. Further, it will allow for a broader contextual view concerning the process of conflict and actions associated with conflict resolution. Thus, two methods of assessing power effectiveness are implemented, including power as it is effective by target response (i.e., microscopic process) and use of power as it is effective by conflict resolution (i.e., macroscopic outcome). With these methods, we compare effectiveness by actor (parents, older and younger siblings), family role (parents and children combined), and sibling birth order.

A comparative view of power effectiveness during family conflict:

Process and outcome

Sandra Della Porta, Shireen Abuhatum, Nina Howe & Hildy Ross

Abstract

This study assessed power effectiveness by actor move and the subsequent target response (i.e., microscopically) as well as power behaviours as they relate to the resolution (i.e., macroscopically) during naturalistic polyadic family conflicts involving three or four family members. Families included sibling dyads (aged 4- and 6-years-old) and their parents. A total of 210 polyadic conflict sequences were coded for: (a) the types of power behaviour; (b) power move effectiveness; and (c) conflict resolution. Findings showed that parents were more effective in their use of power than children, overall. By power type, questioning and coercive power were more effective in the short term during the process of the conflict, whereas simple and elaborated information power were effective in the long-term (i.e., based on winning a conflict). With the use of legitimacy, parents were more effective in the process of conflict and by assessing effectiveness by outcome, older siblings were more effective. During the process of conflict, parents' use of reward power elicited children's immediate compliance, yet when the conflict outcome was taken into account, younger siblings were more effective when using reward power. Use of questions by parents and older siblings were immediately effective, yet parents were more effective in winning a conflict with this type of power. Taken together, this research confirms that there is great variability in individuals' ability to be effective in their use of each type of power in family conflict (Baron & Markham, 2000).

A comparative view of power effectiveness during family conflict:

Process and outcome

Children's experiences in close relationships (i.e., parent-child, sibling) provide infinite opportunities to learn and refine social skills such as language and communication, cooperation, and conflict resolution skills (Hartup & Laursen, 1991, 1999; Parke & Buriel, 2006). Due to the close physical proximity, shared tasks, and long-term history shared among close familial relationships, conflict emerges as an inevitable component of natural interactions (Emery, 1992). During conflict episodes, children and parents have access to a variety of communicative behaviours (i.e., power resources) that can be used to influence their partner (e.g., McIntosh & Punch, 2009; Perlman, Siddiqui, Ram, & Ross, 2000; Telsa & Dunn, 1992). A crucial factor in the reciprocal nature of family exchanges is equal agency, acknowledging that children and their relational partners each have independent ideas, beliefs, and knowledge about their relationship (Cummings & Schermerhorn, 2003; Pontecorvo, Fasulo, & Sterponi, 2001). The execution of power behaviours during conflict exchanges with siblings and parents provides children with the opportunity to develop an understanding of effective tactics.

Although conflict resolution strategies (i.e., aggression, insults, ignoring; e.g., DeHart, 1999; Howe, Rinaldi, Jennings, & Petrakos, 2002; Ross, Ross, Stein, & Trabasso, 2006) and sequential patterns of conflict behaviours (Perlman & Ross, 2005) have been examined, the assessment of power effectiveness has only recently been addressed in the literature on sibling conflicts (Abuhatoum & Howe, 2013) and university students' disputes (Ohbuchi & Katnaka, 2001). We are not aware of any studies that investigate power effectiveness during polyadic (i.e., triadic, quadratic) family conflict

during early childhood. Studying power effectiveness during polyadic family conflict, which differs from dyadic interaction, allows for a broader contextual view concerning the process of conflict and actions associated with conflict resolution. Based on the family systems model, essential aspects of family functioning include: cohesion, decision-making and conflict resolution, and flexibility (Minuchin, 1988, 2002). These aspects are nested in the idea that the individual is part of an organized family system, which is not truly independent and thus must be studied within the context of family relationships (Minuchin, 1985; as cited by Stevenson-Hinde, 1988).

The premise of this study was derived from recent work examining perceptions of power behaviours during parent-child conflict (Della Porta & Howe, 2013) and effective communicative power behaviours during sibling conflict (Abuhatoum & Howe, 2013). The aim was to assess power effectiveness by actor move (verbal or nonverbal behaviour) and the subsequent target response as well as power behaviours as they relate to the resolution during naturalistic family conflicts. These two methods of assessing power effectiveness (i.e., by move and by resolution) were considered by comparing (a) actors (parents versus older versus younger siblings), (b) family role (parents versus children combined), and (c) sibling birth order.

Network of Family Relationships

Based on family systems theory (Minuchin, 1988, 2002) and the transactional model of development (Sameroff, 1975, 2009), family relationships are viewed as bidirectional, mutual, continuous, and are characterized by a high number and variety of interactions over time (Arranz Freijo, 2000; Collins, 1999; Hinde, 1979; Sameroff, 1975, 2009). Further, the sequences or continual exchange of power behaviours rather than a

single act are typically required for the attainment of a goal (Abramson, Cutter, Kautz, & Mendelson, 1958; Sameroff, 1975, 2009; Wolfe, 1959). This continuity allows for each dyad to develop a relational schema (i.e., knowledge structures) of effective influential power behaviours over time (Bugental & Happaney, 2000). Further, individuals can vary greatly in their use of influential and persuasive tactics (Baron & Markham, 2000). Each family subsystem (i.e., marital, parent-child, sibling) comprises different boundaries and interaction styles based on their roles and functions, namely the flow of mutual influence is unique to specific dyads (Minuchin, 1988, 2002; Sameroff, 1994).

For instance, sibling relationships include both reciprocal and complementary exchanges (Hinde, 1979). Their interactions involve a more balanced level of power and nurturance as they interact as equal partners during reciprocal interactions, but differ in age and developmental characteristics that may assign the dominant (i.e., complementary) role to the older rather than the younger sibling (Dunn, 1993; Howe, Ross, & Recchia, 2010). Parent-child relationships are described as complementary with each partner holding different, but dependent roles (Dunn, 1993). When comparing parent-child and sibling dyads, clearly they vary in relation to distribution of power, a key dimension of close relationships, where sibling relationships are more horizontal and parent-child relationships are more vertical in nature (Hartup & Laursen, 1991, 1999; Hinde, 1979).

Power

Social power is defined as the potential ability of one person to influence the direction of another person's behaviour using a variety of resources (French & Raven, 1959; Raven, 2008; Raven, Schwarzwald, & Koslowsky, 1998). Influence, in turn, is

defined as the change in belief, attitude, or behaviour of person B that results from the action of person A (Erchul & Raven, 1997; French & Raven, 1959). This clearly illustrates the notion that power is part of social relationships rather than a personal attribute in which ties of mutual dependence between dyads provide each person with the ability to grant or deny, facilitate or hinder the other's gratification (Emerson, 1962).

Types of power. Individuals have access to a variety of power methods to convince their target during conflicts, including coercive, reward, legitimate, referent, expert, information (simple and elaborated), and questioning power (Dunn & Munn, 1987; French & Raven, 1959; Phinney, 2001; Wang, 2006). Coercive power is used when exerting a threat of punishment or disapproval (i.e., providing a positive or negative punishment), whereas reward power involves the providing of material or social compensation (i.e., positive or negative reinforcement). Legitimate power encompasses any use of one's right to influence (e.g., cultural, political), whereas referent power reflects use of one's relationship to the partner as leverage (e.g., love, friendship). Expert power is based on explicit use of superior knowledge. Information power draws upon reasoning and logic, which can be separated into two types: (a) simple information, encompassing a direct demand or instruction and (b) elaborated information, involving detailed justifications (e.g., references to actions, feelings, social/house rules, etc.). Finally, questioning can be used as a means of influence regarding clarification (i.e., yes/no questions), retrieval of information (i.e., when, where, why questions), or confirmation (i.e., alternative questions).

Power Effectiveness

According to interpersonal communication specialists (Hargie & Dickson, 2004), methods of persuasion can be studied by immediate success (i.e., actor move that changes the target's beliefs, feelings, knowledge or behaviour), lack of success (i.e., unsuccessful attempt to change target's behaviour) or by delayed success (i.e., long-term effect of influential behaviours). Research has focused on the first two methods of assessing effective persuasion, that is, through successful and unsuccessful immediate target responses to actor moves (Abuhatoum & Howe, 2013; Ohbuchi & Kitanaka, 2001; Raven, 2003). However, power and power effectiveness can also be viewed as a longer-term effect (i.e., considered in terms of resolutions) or as it relates to an actor getting their way in a conflict (i.e., winning; Recchia, Ross, & Vickar, 2010). This study utilizes both methods of assessing power effectiveness in family conflict.

Regarding age differences in power use, children increasingly use argument (i.e., negotiation, reasoning) in defense of their own interests from 33 to 47 months with their mothers and siblings (Tesla & Dunn, 1992). Specifically, mothers use more argument and justification over the two time points suggesting that they changed their conflict behaviour in parallel with their children, while siblings did not change their argument strategies (Tesla & Dunn, 1992). This may indicate malleability or a flexible attitude towards how to use power effectively, at least when arguing with mothers. Interestingly, siblings do not differ in overall effectiveness of power during conflicts; however, when assessing type of power effectiveness, both siblings are more effective in utilizing coercive power than both legitimate and information power (Abuhatoum & Howe, 2013).

Recent research on power in the mother-child relationship indicates that children's and mothers' perception of each other's use of power in hypothetical conflict scenarios varied as perceived by each actor and partner (Della Porta & Howe, 2012). Specifically, mothers perceived themselves and were perceived by their children as using more coercion and information power than children, whereas children were perceived as using legitimate power more frequently. Although theoretically each individual in the relationship has access to different types of power, one member can utilize certain types of power more than their partner during conflict episodes.

Although these studies provide initial insights for understanding children's effective use of power behaviours during conflict interactions, the present study furthers our understanding by examining the role of power effectiveness in family conflict during naturalistic interactions by two means. First, we compared differences in actor's effectiveness of power by individuals (i.e., parents, older siblings and younger siblings), family role (i.e., parents versus younger and older siblings) and sibling birth order (i.e., older versus younger siblings). Second, the interactional context of conflict was employed to study power as it elicits use of influential behaviours (Perlman & Ross, 1997) and occurs frequently in families (Howe et al., 2002; Ross et al., 2006).

Conflict

Conflict is defined as the verbal or behavioural incompatibility in goals that is expressed when one person opposes another person's actions or statements (DeHart, 1999; Shantz, 1987). The goal of each person in the conflict is to overcome one another's opposition (Vuchinich, 1987). Not only is family conflict frequent, it can also be intricate

in that it can involve two (dyadic) or three or four (polyadic) family members (Howe et al., 2002; Ross et al., 2006; Vuchinich, Emery, & Cassidy, 1988).

When dyadic conflict is extended by the involvement of a third party (i.e., parent or child), the dynamics of the interaction are altered (Howe, Bukowski, & Aquan-Assee, 1997). Family members may enter a conflict as an active intermediary, attempt to distract the disputants, or interact and then withdraw, which directly influences the character and outcome of the conflict (Vuchinich et al., 1988), making the nature of children's conflicts within the family intricate. This is of particular importance in that simply the presence of a third party can change the process of conflict interaction between a dyad and in turn includes multiple interactions (Howe et al., 1997).

The Present Study

Studying power affords a deeper understanding of how children develop behaviours to act upon their environment and influence their own socialization and learning. Considering that conflict sequences contain continual and reciprocal exchanges of power behaviours (Abramson et al., 1958; Sameroff, 1975, 2009; Wolfe, 1959), our purpose was to assess power effectiveness by two means: (a) microscopically, by actor move and target response, and (b) macroscopically, by total actor power moves and its association with winning a conflict. This approach was assessed in polyadic family conflicts as it varies by individuals, family role, and sibling birth order. To investigate the dynamics of family conflict, sibling dyads (ages 4 and 6 years) and their parents' ongoing naturalistic interactions, including conflict, were recorded in the home context (Ross, Filyer, Lollis, Perlman, & Martin, 1994).

Based on the literature on power (Della Porta & Howe, 2012) and power effectiveness (Abuhatoum & Howe, 2013) during family conflict, the following hypotheses were posited: (a) family members will be more effective using coercion and simple and elaborated information than other types of power (Tesla & Dunn, 1992); (b) parents will be more effective in their use of power than children; (c) considering family status, parents will be more effective with coercive and simple and elaborated information, while children will be more effective in their use of legitimate power; (d) accounting for birth order, siblings will not differ in their effective use of power, regardless of the type of power; (e) older siblings will be more effective in their use of expert and elaborated information power than younger siblings and younger siblings will be more effective in their use of reward power and simple information than older siblings (Martin & Ross, 1995; Perlman, et al., 2000).

Method

Participants

Thirty-nine lower to middle class Caucasian families including two siblings and two parents were recruited from an urban city in southwestern Ontario, Canada (Ross et al., 1994). Families were observed at two time points, however we only used data from the second time point. Older children's ages ranged from 5.4 - 7 years ($M = 6.3$ years, $SD = .42$) and the younger children's ages ranged from 3.8 - 4.7 years ($M = 4.4$ years, $SD = .21$); M age gap = 1.94 years, $SD = .28$ (range = 1.4 to 2.5 years). Parents' age (mothers' $M = 32.8$ years; fathers' $M = 34.6$ years) and educational levels varied.

Procedure

As reported by Ross et al. (1994), observation sessions consisted of two female observers who dictated verbal and nonverbal behaviour (e.g., smile, request, hit) of all sibling and family interactions onto one track of a stereo tape recorder. On the second track, the verbal behaviour of family members was recorded as it naturally occurred in the home. Observers were as unobtrusive as possible and children were instructed not to interact with the observer nor to watch television or play video games. Thirty-two families were observed for a total of nine hours (i.e., six 90-minute sessions), while seven families were observed for ten and a half hours (i.e., seven 90-minute sessions) for a total of 241 sessions. After visiting families, the sessions were transcribed; actor and target were identified, action codes were labeled to categorize individuals' behaviour (e.g., take, request action, protest), and the speech of each individual was transcribed verbatim. Ten 20-minute observations were used for inter-rater reliability with a percent agreement per action code (86%), each actor (88%), and context (e.g., conflict, play) for sequences of interaction of (95%).

Using the detailed transcripts, we identified polyadic conflict sequences including three or more family members. The next criterion was that the sequence had to match our definition of conflict (i.e., verbal or behavioural incompatibility in goals expressed when one person explicitly opposes another person's actions or statements; DeHart, 1999; Shantz, 1987; Vuchinich, 1987). Further, each sequence had to include at least one verbal or nonverbal action move by actor allowing for a minimum of three moves per sequence. Conflict sequences involving a reference to the observer or her tape recorder were not used. Using these criteria, a total of 210 family conflict sequences were coded (range = 3-320 lines; $M = 29$ lines/sequence).

Coding

The coding process involved three steps that identified: (a) the types of power behaviour (i.e., verbal, nonverbal) utilized by each family member (i.e., actor); (b) power move effectiveness (i.e., successful or unsuccessful) based on the target's response; and (c) how the conflict was resolved.

Power types. French and Raven's (1959) typology of power was used as a basis for the coding scheme (i.e., coercive, reward, legitimate, referent, expert, and information power). Coercive power reflects positive or negative punishment (including physical or verbal threats). Reward power encompasses acts of positive or negative reinforcement. Legitimate power was coded when an actor referred to their rights as a person, such as moral principles, status of authority or preferences. Referent power was identified when the actor referred to the maintenance of a positive relationship with their parent or sibling. Expert power consisted of the use of superior knowledge compared to the target. Two sub-categories were created for information power, specifically simple and elaborated information (Phinney, 2001; Dunn & Munn, 1987). Simple power reflected a demand or direct instruction whereas elaborated information was defined as the use of justification or reasoning. Finally, questioning power was added to the coding scheme, which emerged from the data (Wang, 2006) and involved the tactic of requesting clarification, posing a forced choice query or open-ended questions (see Table 1 for examples).

Each actor move may have involved more than one type of power, where one could have referenced two types of influence (e.g., "No, that's not fair" was coded as simple information and legitimate power). In some cases, a move was non-oppositional

(unrelated to the conflict), therefore only the influential behaviours were coded for power. Interrater reliability was conducted on 20% of the conflict sequences ($n = 42$) and *kappa* values were: coercion = .91; reward = .99; referent = 1.00; legitimate = .77; expert = 1.00; simple information = .80; elaborated information = .86; questioning = .91.

Power effectiveness. Every power move was rated for effectiveness as a measure of contingent activity (Abuhatoum & Howe, 2013). Specifically, the target's response to an actor's power move was coded as successful or unsuccessful. Successful power behaviours were coded when one party effectively employed power as a means to achieve a desired outcome or influenced the behaviour of the other individual. This was determined in relation to the target's behaviour (e.g., mother tells older sibling that it is not very nice to take the baby's doll, the older sibling then returns doll to the baby). In contrast, a power move was deemed ineffective when the target did not comply or change his/her behaviour. This occurred when (a) the target met the actor's use of power with opposition or resistance (e.g., younger sibling asks mother for the doll, but mother refuses and gives it to the older sibling), (b) the actor's behaviour was an overt attempt (e.g., mother asks the child to bring her the broken chair so she can fix it and child ignores mother), or (c) the reciprocated behaviour was an appeal to a third party (e.g., older sibling reaches to take a toy away from the younger sibling who starts to cry and walks over to the mother). More than one type of power could be identified on the same sequence line, but if both types of power were attempts or both were successful, then both types of power were counted as equivalent to one instance of an attempt or success per line. Interrater reliability for successful/unsuccessful power moves was calculated on 20% of the conflict sequences ($n = 42/210$), which resulted in a *kappa* of .87.

Conflict resolution. Each conflict sequence was coded for resolution based on the initial topic of argument and outcome. The three mutually exclusive resolutions were coded: (a) win-lose when one or more parties submitted or complied with another party or parties' argument; (b) compromise when all fighters negotiated by suggesting an alternative or by each fighter giving a little to accept a position that fell between the extremes of the conflict; (c) no resolution when the conflict ended in a standoff or simply dissipated. Reliability for conflict resolutions based on 20% of the conflict sequences ($n = 42/210$) revealed a *kappa* value of .92.

Results

The unit of analysis was the family, in which 210 conflict sequences were identified in 35/39 families. Sequences included three-party (i.e., mother with two children = 108; father with two children = 37; mother and father with one child = 22) and four-party interactions (i.e., mother, father, and two children = 44). Mother and father actions were collapsed into one parent category considering that the father was involved in half of the sequences in comparison to the mother. Also, both referent and expert power were removed from analyses considering that they were referred to rarely.

The findings below display power effectiveness in two ways, microscopically and macroscopically. The microscopic method reflects power effectiveness as a percent rate of effectiveness per power move (i.e., an actor's verbal or nonverbal behaviour towards a target) where the total successful power moves were divided by all power moves (successful/successful + unsuccessful). The macroscopic method reflects the association between type of power executed by each actor and their victory in a win-lose conflict resolution. For example, each actor's use of power per conflict was tallied based on the

condition that the resolution was a win-lose outcome and they were the winner. As such, analyses were conducted for power effectiveness by actor move and target response as well as actor power by win-lose outcome. Each section analyzed effectiveness overall, by actor (parent, older and younger sibling), family role (parent and child) and sibling birth order (older and younger sibling) using repeated measures ANOVA with a Bonferroni correction for simple effect tests. Descriptive statistics and frequencies of the six types of power moves, effectiveness of power moves, and total power moves by actor are presented in Table 2. No sibling gender, age or age gap effects were evident in actor success rates or win-lose outcomes.

Overall Power Effectiveness by Process

The following results compared overall power effectiveness by actor, family role and sibling birth order regardless of the type of power executed. When comparing parents, older and younger siblings, there was a significant difference, $F(2, 33) = 14.44, p < .001, \eta^2 = .47$. Parents were more effective in their use of power ($M = .32, SE = .02$) compared to older ($M = .23, SE = .03$) and younger siblings ($M = .19, SE = .02$). Further, parents were significantly more effective than children combined, $F(2, 34) = 21.17, p < .001, \eta^2 = .38$. Parents were effective 32% of the time ($SE = .02$), while children were 21% effective ($SE = .02$). No significant differences were indicated when comparing older and younger siblings' power effectiveness overall. Older siblings were 23% effective ($SE = .03$) and younger siblings were 19% effective ($SE = .02$).

Type of Power Effectiveness by Process

These analyses revealed the individual differences in the six types of power and their effectiveness by actor, family role, and birth order.

Overall. Results comparing type of power effectiveness by move (regardless of the actor) showed that Mauchly's test of sphericity was violated, $\chi^2(14) = 38.67, p < .01$. Correcting for the degrees of freedom with Greenhouse-Geisser estimates ($\varepsilon = .65$), findings displayed a significant main effect, $F(3.26, 110.81) = 15.14, p < .001, \eta^2 = .31$. Simple effect tests showed that questioning power was most likely to be effective ($M = .47, SE = .05$) followed by coercive power ($M = .36, SE = .03$) over all other types of power, including reward ($M = .18, SE = .04$), legitimate ($M = .19, SE = .03$), simple information ($M = .15, SE = .02$) and elaborated information ($M = .23, SE = .03$).

Actor. Parents, older siblings and younger siblings were compared for effectiveness for each type of power (see Table 3). Results showed no significant differences between actors for coercive power, $F(2, 33) = 1.18, p = .32, \eta^2 = .07$. Mauchly's test of sphericity was violated for the main effect of reward power effectiveness, $\chi^2(2) = 15.70, p < .001$. After correcting for the degrees of freedom with Greenhouse-Geisser estimates ($\varepsilon = .54$), a significant main effect remained, $F(1.05, 9.68) = 11.22, p < .01, \eta^2 = .56$. Parents were more effective in using reward power than older siblings and a trend was revealed between parents and younger siblings ($p = .08$). Mauchly's test of sphericity was violated for the main effect of legitimate power effectiveness, $\chi^2(2) = 17.97, p < .05$. A significant main effect, $F(1.68, 57.36) = 21.66, p < .001, \eta^2 = .39$, was revealed after correcting for the degrees of freedom with Greenhouse-Geisser estimates ($\varepsilon = .84$), where parents were more effective than older and younger siblings. Simple information effectiveness comparisons showed that parents were more effective than younger siblings but not older siblings, $F(2, 33) = 5.16, p < .05, \eta^2 = .24$. Parents were more effective in their use of elaborated information, $F(2, 33) =$

3.90, $p < .05$, $\eta^2 = .19$, and questioning, $F(2, 33) = 6.36$, $p < .01$, $\eta^2 = .28$, than older siblings.

Family role. After comparing parents' and combined children's type of power effectiveness, results (see Table 4) revealed that there were no significant differences in effective use of coercive power, $F(1, 34) = 1.89$, $p = .18$, $\eta^2 = .05$, elaborated information power, $F(1, 34) = 2.70$, $p = .11$, $\eta^2 = .07$, or questioning power, $F(1, 34) = .83$, $p = .37$, $\eta^2 = .02$. However, there were significant differences in effective use of reward power, $F(1, 12) = 14.70$, $p < .01$, $\eta^2 = .55$, legitimate power, $F(1, 34) = 36.67$, $p < .001$, $\eta^2 = .52$, and simple information power $F(1, 34) = 13.97$, $p < .01$, $\eta^2 = .29$, in which parents were more effective than children combined in all types of power.

Sibling birth order. When comparing older and younger siblings' type of power effectiveness, findings (see Table 5) revealed that siblings did not differ in their effective use of coercive, $F(1, 34) = .44$, $p = .51$, $\eta^2 = .01$, simple information, $F(1, 34) = .62$, $p = .44$, $\eta^2 = .02$, elaborated information, $F(1, 34) = .77$, $p = .39$, $\eta^2 = .02$, or questioning power, $F(1, 12) = 0.00$, $p = .99$, $\eta^2 = .00$. Yet, younger siblings were more effective in executing reward power, $F(1, 19) = 4.71$, $p < .05$, $\eta^2 = .20$, whereas older siblings used legitimate power more effectively, $F(1, 34) = 4.55$, $p < .05$, $\eta^2 = .12$.

Overall Power Effectiveness by Outcome

Use of different types of power as it relates to the winning of a conflict was the second method of assessing power effectiveness. Conflict sequences ending in a win-lose outcome were utilized ($n = 145$), which comprised 69% of the conflict sequences ($M = 4.14$, $SE = 4.37$) and occurred in 31 families. Conflicts ending without a resolution were found in 27% of the sequences ($n = 56$; $M = 1.60$, $SE = 1.77$), while compromise

occurred the least frequently with a total of nine occurrences ($M = .26$, $SE = .51$). Using only the conflicts that ended in a win-lose outcome, proportion scores were calculated for each analysis to consider each type of power in relation to the query at hand. In contrast to the first set of analyses, which assessed differences in family members' effectiveness of power by each power type, this set of results analyzed overall differences in types of power utilized in comparison to one another.

Power effectiveness by outcome.

Actor. To compare the actors' likelihood of winning a conflict, proportions were calculated based on the number of sequences in which an actor won in comparison to the total number of win-lose resolutions (e.g., parent wins/parent win + older win + younger win). The analyses comparing the proportion of actor wins indicated a significant difference in actors' likelihood of winning a conflict, $F(2, 29) = 11.78$, $p < .001$, $\eta^2 = .45$. Parents ($M = .54$, $SE = .05$) were more likely to win conflicts than older ($M = .18$, $SE = .05$) and younger children ($M = .28$, $SE = .07$).

Family role. To compare parents and children's (siblings combined) use of power by win-lose outcome, proportion scores were calculated by dividing parents' win by total parent and child wins. Results indicated that parents and children did not significantly differ in their likelihood of winning a conflict; specifically, parents won 54% of the conflicts ($SE = .05$), while children combined won 46% of the disputes ($SE = .05$).

Sibling birth order. To assess differences in siblings' likelihood of winning a conflict, proportion scores were calculated by dividing one sibling's wins by the total wins by both siblings (i.e., older sibling wins/older sibling wins + younger sibling wins).

A trend was found, $F(1, 26) = 3.00, p < .10, \eta^2 = .10$, in that younger siblings ($M = .62, SE = .07$) were more likely to win than older siblings ($M = .38, SE = .07$).

Type of power effectiveness by outcome. To compare the use of power and the likelihood of winning with a particular type of power compared to others, proportion scores were calculated by dividing the type of power used by one actor by all types of power used by that actor (i.e., parent coercion/parent coercion + parent reward + parent legitimate, etc.). The same method was applied for older and younger siblings.

Overall. A repeated measures ANOVA comparing the six types of power in relation to winning a conflict indicated that Mauchly's test of sphericity was violated, $\chi^2(14) = 25.72, p < .05$. After correcting for the degrees of freedom with Greenhouse-Geisser estimates ($\epsilon = .77$), a significant effect remained, $F(3.84, 11.25) = 7.93, p < .001, \eta^2 = .22$. In particular, the use of simple ($M = .24, SE = .02$) and elaborated information power ($M = .24, SE = .03$) were more likely to be associated with winning a conflict than coercive ($M = .15, SE = .01$), reward ($M = .08, SE = .02$), and questioning ($M = .10, SE = .02$) power. No simple effects were shown for legitimate power ($M = .19, SE = .03$).

Actor. Results from a 3 (actor) by 6 (type of power) repeated measures ANOVA showed that Mauchly's test of sphericity was violated for the interaction, $\chi^2(54) = 92.26, p < .01$; correcting for the degrees of freedom with Greenhouse-Geisser estimates ($\epsilon = .57$) showed a significant effect, $F(3.88, 50.40) = 3.65, p < .05, \eta^2 = .22$. Simple effect tests (see Table 6) indicated that younger siblings were more likely to win conflicts using reward power than parents or older siblings, parents and older siblings were more likely to win conflicts using legitimate power than younger siblings, and parents were more likely to win conflicts using questioning power than older and younger siblings.

Family role. A 2 (family role) by 6 (type of power) repeated measures ANOVA indicated that Mauchly's test of sphericity was violated for the interaction, $\chi^2(14) = 47.42, p < .001$. Correcting for the degrees of freedom with Greenhouse-Geisser estimates ($\epsilon = .57$) revealed a significant interaction, $F(2.85, 68.47) = 6.27, p < .001, \eta^2 = .21$. Simple effects (see Table 7) showed that children were more likely to win conflicts using reward power than parents, while parents were more likely to win conflicts using simple information and questioning power than children. Parents and children were equally likely to win using coercive, legitimate and elaborated information power.

Sibling Birth Order. A 2 (sibling birth order) by 6 (type of power) repeated measures ANOVA indicated that Mauchly's test of sphericity was violated for the interaction, $\chi^2(14) = 29.92, p < .01$, and as such the degrees of freedom were corrected with Greenhouse-Geisser estimates ($\epsilon = .53$). Once the correction was made, findings revealed a significant interaction, $F(2.65, 34.43) = 3.88, p < .05, \eta^2 = .23$. Simple effects (see Table 8) denoted that older siblings were more likely to use legitimate power and elaborated information (trend; $p = .06$) than younger siblings, while younger siblings used reward power more than older siblings.

Discussion

Understanding children's agency and power in close relationships involves the study of multiple aspects of familial interactions and informs our understanding of how children develop motivational behaviour to act upon their environment and influence others. As such, this study investigated parents' and children's effectiveness in executing agency by use of power during polyadic family conflicts. Specifically, power effectiveness was assessed as it varied by actors and different relational combinations.

Two methods of analysis were implemented: (a) effectiveness of power during the process of conflict (i.e., microscopic, by actor move and target response); and (b) effectiveness of power by outcome (i.e., macroscopic, by use of power and outcome).

Overall Power Effectiveness

The prediction that parents would be more effective in their use of power than children was partially supported microscopically by both actor (i.e., parents were more effective as compared to both older and younger children individually) and by family role (i.e., parents were more effective compared to both children combined) comparisons. However, when comparing macroscopically support was only evident when comparing effectiveness by actor (i.e., parents were more likely to win a conflict than older and younger sibling independently) and not family role (i.e., parents were not more likely to win a conflict than children in combination). The pattern of findings supports the hierarchical model of parent-child relationships as parents' execution of power may be justified due to their social and generational position (Punch, 2005). Considering our focus on multiple party conflicts, it is possible that the parent-child dynamics varied depending on which three parties were involved. Possibly, parents were not as effective in their use of power when arguing with two children as opposed to two parents and one child. Future research should address this query as children's social behaviours depend on the social context (Kuczynski, 2003; Vuchinich et al., 1988). For instance, children perceive certain behaviours as acceptable with siblings, but not with parents (Punch, 2005).

Furthermore, when comparing use of power and each actor's likelihood of winning a conflict, the outcome may depend on each actor's position in the conflict (i.e.,

initiator, resistor, third party). When a third party becomes involved they may enter into an alliance with another actor (Vuchinich et al., 1988). In this study, parents won 54% of the time, whereas younger siblings won 28% and older siblings won 18% of the time, perhaps indicating that parents may have allied with younger siblings for about half of their wins. Future research examining how each family member becomes involved in the conflict would allow for a more detailed investigation of how family conflict unfolds and how the process and outcome vary based on contextual factors.

As expected, there was no difference in effective use of power between siblings microscopically; however, macroscopically, a trend indicated that younger siblings were more likely to win conflicts than older siblings. Here, the process of conflict differs from conflict resolution, in that one may be effective in using power during the conflict, but this does not signify effectiveness in regard to conflict resolution. As Perlman and colleagues (2000) argued, resolutions are typically analogous to power differentials between actors, where symmetrical relationship actors' (i.e., siblings') likelihood of winning a conflict differs from asymmetrical relationship actors (i.e., parent-child). In line with the literature, our findings indicate that parents were more likely to succeed (Stein & Albro, 2001; Vuchinich, 1987), however, when comparing siblings' likelihood of success using power, conflict resolutions are less predictable (Recchia et al., 2010).

Type of Power Effectiveness

Overall. Each method of analysis partially supported the hypothesis that coercion, simple and elaborated information power would be more effective than other types of power. Questioning and coercive power were effective in the short term during the process of the conflict, whereas simple and elaborated information power were effective

in the long-term (i.e., winning a conflict). Apparently, interrogative approaches employed to achieve a resolution were effective, perhaps because the questioner placed the respondent in a position where s/he is expected to comply or respond (Wang, 2006). Questions can present different points of view to the actors (e.g., “How does Daddy feel about being blackmailed like that?”) and knowledge of appropriate behaviour (e.g., “What were you told about that?”) or social rules (e.g., “Do you mean your apology?”). In contrast, coercion is consistent with aggressive, threatening behaviour, typically effective in the short term, but it also arouses anger and hostility in the target, who may respond in kind (Grusec & Goodnow, 1994), thus resulting in a negative feedback loop of coercive behaviours (Minuchin, 1985; Patterson, 1983). Questioning and coercive power may be harder to ignore than a demand (i.e., simple information) or explanation (i.e., elaborated information), which are socially independent (Raven, 1993). Use of simple and elaborated information (i.e., instruction and reasoning) may have been effective in the longer term as it develops the actors’ social understanding of conflict (e.g., how did the conflict start, was there misbehaviour, what were the actor’s intentions), which would heighten awareness of the transgression (Grusec & Goodnow, 1994). These developmental outcomes can vary based on the information provided, whether an actor is explaining their own or another actor’s actions or feelings, referring to social or household rules, or explaining the consequences of their actions.

Actor and family role. Due to limited literature, no predictions were made comparing the three actors’ power effectiveness. However, the expectation for family role (i.e., parents would be more effective in their use of coercive, simple and elaborated information power, while children would be more effective in their use of legitimate

power) was applied to comparisons between the three actors (i.e., parent, older, younger).

Although children perceived parents as having the ability to force compliance and that siblings do not (Punch, 2005), the present findings revealed that regardless of the method of effectiveness, use of coercive power was equally effective for each actor as well as by family role. This discrepancy may be due to the polyadic conflict context, which affords a different view of power compared to dyadic conflict. Even though children tend to cooperate more with parents based on their physical and social-cognitive advantages, the presence of a third party influences each actors' behaviour (Howe et al., 1997; Valentine, 1999).

When examining actor moves, simple information was more effective for parents than younger siblings but not older siblings; yet when comparing family role, parents were more effective than children, which partially supports predictions. There were no differences in actor effectiveness in use of simple information power to win a conflict, but parents were more effective than children combined. In sum, use of simple requests or demands (e.g., "give me the guy"; "don't jump up anymore") was effective for parents, especially in comparison to younger siblings. Perhaps older siblings were slightly (but not significantly) more effective than younger siblings in using simple information, however we did not identify the target of each actor's power behaviour. Social relations model (Eichelsheim, Deković, Buist, & Cook, 2009; Kenny, Kashy, & Cook, 2006) may be one approach to assess effectiveness by partner response, dyad, and family context.

In regard to use of elaborated information by actor move, parents were more effective than older siblings but not younger siblings, which partially supported predictions. This suggests that children comply with parents' reasoning more than parents

and younger siblings comply with older siblings' reasoning. This may have occurred based on the type of justification used by parents and older siblings. Specifically, older siblings may have used reasoning that was unclear to the younger sibling (e.g., "Daddy's gonna be angry") or not acceptable to parents (e.g., "I can't eat all of my fish"). Although children's use of justification has been found to increase with age, their effectiveness may differ (Dunn & Munn, 1987). Future research can take a detailed, qualitative approach to studying elaborated information power and the target's response.

Parents were more effective than children individually and combined during the process of conflict when using legitimate authority (e.g., "Those are my rules"), contrary to expectation. This finding is promising in that theoretical arguments indicate that parents' use of legitimate authority can improve children's self-control abilities by avoiding behaviours that elicit authoritarian statements (Punch, 2005). When assessed by outcome, both parents and older siblings were more effective in use of legitimacy (e.g., "We're supposed to share") than younger siblings, which may reflect their hierarchical status and cognitive ability.

During the process of conflict, parents' use of reward elicited immediate compliance from children, yet when the outcome of the conflict was taken into account, children, specifically younger siblings, were more effective when using reward power. Perhaps parents and children use different methods of reward power, for instance, parents may have used more sophisticated reward methods by providing a positive reinforcement (e.g., "You'll be able to eat your dessert after you finish your dinner") for children's appropriate behaviour due to their greater cognitive ability and access to resources. Children may have used less sophisticated reward power by providing a negative

stimulus such as crying or whining (Kuczynski, 2003; Rinaldi & Howe, 2003). This type of behaviour, especially for younger siblings may be an effective method of communication to express a request, complaint, or show their frustration, which appears to work in their favour (Chang & Thompson, 2010). The use of reward should not be ignored as it reveals the resources available to actors and places the target in a position to either accept or reject the positive or negative offer (Hargie & Dickson, 2004). Further research might identify the types of reward that are most effective as well as which target is more likely to yield to certain types of reward.

Use of questions by parents and older siblings were immediately effective during the process of conflict compared to younger siblings' questions, yet parents were more effective in winning a conflict with this type of power. Use of questioning power overall was the most effective type of power for parents when compared to both children and it may be that this is one of the strategies that allows parents to have more power over children. As discussed earlier, questioning power entails an underlying tone or expectation of compliance that reflects a method of control, and has been identified as "one of the most powerful tools in communication" (Hawkins & Power, 1999, p. 235). Parents have higher status than children, but may use metacognitive questioning techniques to guide children to become more aware of the conflict situation (see Study 1; Thompson & Williams, 2009). It might also allow them to assess their own discourse, strategies, and past actions that can contribute to the learning of problem solving and decision-making (Hargie & Dickson, 2004; Thompson & Williams, 2009).

Taken together, this research confirms that there is great variability in individuals' ability to be effective in their use of each type of power in family conflict (Baron &

Markham, 2000). Furthermore, we support the idea that there are multiple means of assessing effectiveness of communicative behaviours (Hargie & Dickson, 2004).

Sibling birth order. Using both methods of effectiveness assessment, siblings did not differ in their use of coercive, simple information or questioning power, counter to expectations. Partial support for elaborated information power was found when examining win-lose outcomes; namely older siblings were more likely to win than younger. In assessing reward power effectiveness, the hypothesis that younger siblings would be more effective than older siblings was supported. In addition, legitimate power was more effective for older siblings than younger siblings. Although older siblings' reasoning during the conflict was not immediately effective, they were more likely to win a conflict using legitimate influence compared to younger siblings. It may be that throughout the conflict, use of reasoning convinced the combatant to submit eventually to the older sibling. Younger siblings, at this age (4-years), were likely to bring reasoned argument into the conflict context for their own self-interest, but apparently proportionally less than their older siblings (Tesla & Dunn, 1992). Further, this type of power is socially independent, thus the ability of older siblings to use justification works in their favour along with their more advanced knowledge and social understanding (Dunn, 1993; Howe et al., 2011; Perlman et al., 2000).

In line with the literature, younger siblings were more likely to use reward power, particularly negative rewards such as whining and crying (Martin & Ross, 1995). This reflects the less sophisticated cognitive skills and abilities that younger children possess in relation to their older siblings (Kuczynski, 2003; Rinaldi & Howe, 2003). Based on younger siblings' history of family interactions, it may be that they have developed a

relational schema for using negative reinforcement to get what they want in a conflict (Chang & Thompson, 2010; Grieshaber, 2004; Lollis & Kuczynski, 1997).

Legitimate power encompassed three subcategories: authority (e.g., “You know what behaviour is expected at the table and that is not”) typically executed by parents, moral principles (e.g., “That belongs to me”), and preferences (e.g., “I don't want any more”). Siblings do not possess legitimate authority, nor do they control household resources to the same degree as parents (Dowding, 1996), nevertheless, older siblings were more effective in their use of legitimate rights of justice and personal preferences than younger siblings. Future studies can assess the type of legitimacy (moral rights or principles) used and identify the topic of conflict (i.e., ownership, obnoxious behaviour) and associations with social domain (i.e., moral, conventional, personal; Smetana, 2006), which can aid in understanding the context in which legitimacy is most likely to be used. Perhaps older siblings recognize when a topic is related to a moral issue and argue appropriately using justice and rights, whereas younger siblings may interpret an argument as a personal issue using other tactics (Recchia & Howe, 2009).

Lastly, a longitudinal study of the effective use of power can further assess the actor's success or failure, which may lead to increased use of that type of power (if successful) or a change in power used (if unsuccessful). Therefore, the effect of reciprocal feedback can be studied to determine whether power effectiveness changes the actor's self-perceptions and perceptions of the target based on changes in routine social interaction and expectations of target responses (Goffman, 2001; Raven, 1993).

Conclusion

There are some limitations to our study. First, most families were middle class, Caucasian, and Canadian, which limits generalizability of findings. Second, the number of families included in the analyses varied between 13 and 35 when analyzing effectiveness macroscopically as parents did not use reward power in all families and children did not use questioning power in all families, which changes the comparability between methods of assessment. Nevertheless, the data provide new and rich insights into our understanding of power effectiveness in the context of polyadic family conflicts.

In conclusion, this research depicts multiple novel elements in the study of family conflict, as it assessed power effectiveness by two means. Identifying power effectiveness using a microscopic (by process) as well as a macroscopic (by win-lose outcome) manner, rich patterns of varied findings were revealed. Taking into account each family member as individual agents and comparing power effectiveness by family role and sibling birth order, we represented the complexity of studying polyadic conflict. This provides a basis from which to understand how children use their own agency and power to interpret what they have learned in order to more effectively maneuver through their social worlds.

Table 1

Definitions and Examples of Power Coding Scheme

Type of Power	Sub-Categories	Definition	Example
Coercive	Physical	Use of physical coercion/force	Push, take
	Verbal/non-verbal	Verbal/nonverbal threats	“I’m gonna throw Snuffleupagus”
Reward	Positive	Use of positive conditions towards desired outcome	“You could win all the marbles if you play”
	Negative	Use of negative conditions towards desired outcome	Whining, begging
Legitimate	Moral Principle	Defending the rights of yourself or another person	“No fair”; “Hurting people is wrong”
	Authority	Using rights of social hierarchy or belief that authorities are to be obeyed	“You have to put the crayons back right now”
	Preference	Having the right or opportunity to choose or assert one’s desire	“I need that stick to make a star”; “I don’t want it”
Referent		Ability to influence others because with respect, admiration, or likability	“I wish you weren’t my mommy”
Expert		Refers to one’s superior knowledge or ability	“This is how you it. mom told me”
Information	Simple	An instance of a demand without explanation	“Give me the guy”
	Elaborated	Using behaviour or feelings, social rules, consequences or object as justification	“I can’t drink this hot chocolate, it’s too unpleasure”
Questioning		Includes affirmation, when, where, why, and alternative questions	“Why did you do that?”; “Who wrecked the tower?”

Table 2
Descriptive Statistics for Type of Power, Effectiveness, and Actor Power Move

	Minimum	Maximum	Frequency	<i>M (SE)</i>
Type of Power				
Coercion	0	79	872	24.91 (20.13)
Reward	0	68	478	13.66 (17.63)
Legitimate	0	102	968	27.66 (27.40)
Simple Information	2	213	1299	37.11 (44.21)
Elaborated Information	3	215	1292	36.91 (41.41)
Questioning	1	88	514	15.57 (18.72)
Effectiveness				
Successful	1	167	1283	36.66 (36.05)
Unsuccessful	12	550	4140	118.28 (121.57)
Actor Power Move				
Parent	6	351	2376	67.88 (73.64)
Older	2	147	1455	41.57 (40.14)
Younger	2	211	1592	45.48 (46.25)

Note: Statistics are based on the total identified types of power, effectiveness and actor power move per family. Referent and expert power were excluded from analysis due to their infrequent use.

Table 3

Microscopic Power Effectiveness by Actor

	Parent	Older	Younger
	<i>M (SE)</i>	<i>M (SE)</i>	<i>M (SE)</i>
Coercive	.43 (.05)	.38 (.05)	.35 (.04)
Reward	.54 (.09) ^{at}	.08 (.03) ^a	.18 (.06) ^t
Legitimate	.26 (.04) ^{ab}	.10 (.02) ^a	.04 (.01) ^b
Simple Information	.20 (.03) ^a	.13 (.03)	.09 (.03) ^a
Elaborated Information	.25 (.03) ^a	.15 (.03) ^a	.20 (.04)
Questioning	.47 (.06) ^a	.21 (.06) ^a	.25 (.06)

“a” and “b” = $p < .05$; “t” = $p < .10$

Note. Superscript letters represent where the significant differences lie between each actor for each type of power (e.g., “a” is significantly different than “a”). Means and standard deviations are based on the success rate per family role (i.e., success/(success + attempt)).

Table 4

Microscopic Power Effectiveness by Family Role

	Parent	Child
	<i>M (SE)</i>	<i>M (SE)</i>
Coercive	.43 (.05)	.36 (.04)
Reward	.56 (.09) ^a	.13 (.04) ^a
Legitimate	.26 (.04) ^b	.06 (.01) ^b
Simple Information	.20 (.03) ^a	.10 (.02) ^a
Elaborated Information	.25 (.03)	.19 (.03)
Questioning	.46 (.06)	.40 (.05)

a = $p < .01$; b = $p < .001$

Note. Superscript letters represent where the significant differences lie between parent and child power effectiveness (e.g., “a” is significantly different than “a”). Means and standard deviations are based on the success rate per family role (i.e., success/(success + attempt)).

Table 5

Microscopic Power Effectiveness by Sibling Birth Order

	Older	Younger
	<i>M (SE)</i>	<i>M (SE)</i>
Coercive	.37 (.05)	.35 (.04)
Reward	.07 (.03) ^a	.24 (.07) ^a
Legitimate	.10 (.02) ^a	.04 (.01) ^a
Simple Information	.13 (.03)	.10 (.03)
Elaborated Information	.15 (.03)	.20 (.04)
Questioning	.36 (.10)	.36 (.11)

All $p < .01$

Note. Superscript letters represent where the significant differences lie between older and younger siblings' power effectiveness (e.g., "a" is significantly different than "a"). Means and standard deviations are based on the success rate per sibling (i.e., success/(success + attempt)).

Table 6

Macroscopic Power Effectiveness by Actor

	Parent	Older Sibling	Younger Sibling
	<i>M (SE)</i>	<i>M (SE)</i>	<i>M (SE)</i>
Coercive	.13 (.02)	.20 (.04)	.24 (.05)
Reward	.03 (.01) ^a	.08 (.03) ^b	.22 (.04) ^{ab}
Legitimate	.16 (.02) ^a	.19 (.04) ^b	.08 (.03) ^{ab}
Simple Information	.30 (.03)	.20 (.04)	.21 (.05)
Elaborated Information	.27 (.04)	.30 (.05)	.21 (.05)
Questioning	.13 (.02) ^{ab}	.03 (.01) ^a	.04 (.01) ^b

All $p < .05$

Note. Superscript letters represent where the significant differences lie between each actor for each type of power (e.g., “a” is significantly different than “a”). Means and standard deviations are based on proportional power effectiveness per actor based on outcome.

Table 7

Macroscopic Power Effectiveness by Family Role

	Parent	Child
	<i>M (SE)</i>	<i>M (SE)</i>
Coercive	.13 (.02)	.19 (.03)
Reward	.03 (.01) ^a	.18 (.04) ^a
Legitimate	.17 (.02)	.13 (.03)
Simple Information	.31 (.03) ^a	.16 (.03) ^a
Elaborated Information	.24 (.03)	.30 (.05)
Questioning	.13 (.02) ^a	.04 (.02) ^a

All $p < .001$

Note. Superscript letters represent where the significant differences lie between parent and child power effectiveness (e.g., “a” is significantly different than “a”). Means and standard deviations are based on proportional power effectiveness per family role based on outcome.

Table 8

Macroscopic Power Effectiveness by Sibling Birth Order

	Older Sibling	Younger Sibling
	<i>M (SE)</i>	<i>M (SE)</i>
Coercive	.20 (.04)	.24 (.05)
Reward	.08 (.03) ^a	.22 (.04) ^a
Legitimate	.19 (.04) ^a	.08 (.03) ^a
Simple Information	.20 (.04)	.21 (.05)
Elaborated Information	.30 (.05) ^t	.21 (.05) ^t
Questioning	.03 (.01)	.04 (.01)

a = $p < .001$; "t" = $p < .10$

Note. Superscript letters represent where the significant differences lie between older and younger sibling' power effectiveness (e.g., "a" is significantly different than "a"). Means and standard deviations are based on proportional power effectiveness per sibling based on outcome.

Family Conflict in Broader Context: Power, Topic, and Social Domain

Study two investigated parents' and children's effectiveness in executing power towards one another during polyadic family conflicts. Two methods of analysis were implemented to assess power effectiveness: by actor move and target response (i.e., microscopic process) and by conflict resolution (i.e., macroscopically by outcome). Each method was utilized to identify how power effectiveness varied by actors, family role and sibling birth order. Findings built on knowledge from Study 1 by displaying that power effectiveness differs not only by how it is assessed (i.e., microscopically or macroscopically) but also differs by actor, family role and sibling birth order. For instance, simple and elaborated information powers were more likely to be used overall, yet when effectiveness is calculated, these two types of power are more likely to be effective based on associations to win-lose outcome. In addition, questioning and coercive power were more effective in based on actor move and target response.

Taken together, the first two studies confirm that there is great variability in individuals' ability not only to execute power behaviours but in their effective use of each type of power in family conflict. Further, we support the idea that there are multiple means of assessing effectiveness of communicative behaviours (Hargie & Dickson, 2004). This research depicts multiple novel elements in the study of family conflict with each studies rich and contrasting pattern of findings. Despite what has been displayed thus far, there are other key issues to take into account when studying children's interactions in polyadic family conflict; contextual elements, including not only the use of power but the conflict role, the topic under argument as well as the social domain used to support argumentation are crucial factors.

As such, the third study investigates the pre-stated contextual factors that make up part of polyadic family conflicts. Further, the interplay between some of these factors must be considered independently and as a whole given the complexity of the family system (Minuchin, 1988; Sroufe & Fleeson, 1988; Stevenson-Hinde, 1988). This next provides another novel and complex view of how informal polyadic family conflicts not only provide a look into how children interact in their social environment, but can serve as a window into the roles each member takes on in a conflict, how different topics of conflict relate to arguments towards differing social domains, and the variability in actor's use of power supporting their dispute for certain social domains.

Contextual Elements of Family Conflict: Power, Topic and Social Domain

Sandra Della Porta, Ryan Persram, Nina Howe & Hildy Ross

Abstract

This study assessed the contextual complexity of polyadic family conflict (i.e., three or more participants) by identifying the conflict roles assumed by family members, the topics under argument, execution of power resources, and the social domain of each argument. Data consisted of transcripts of naturalistic observations of family interactions in the home for six or seven 90-minute sessions. A total of 35/39 families consisting of two siblings, approximately 4- and 6-years of age, and their parents engaged in polyadic conflict; 210 conflict sequences were identified. In terms of conflict role, each actor entered the conflict in different ways (e.g., parents entered more as an additional party). When assessing social domain argumentation, parents were more likely to refer to the conventional and moral domains and children were more likely to refer to the personal and moral domains. When taking conflict topic into consideration, parents referred more to the conventional domain when arguing about controlling actions and rule violations and more to the moral domain when the issue revolved around ownership. Regarding conflicting information and obnoxious behaviour, older siblings were more likely to argue for the personal domain, while for ownership both older and younger siblings were more likely to use moral arguments. Finally, each actor argued for differing social domains by employing certain types of power over others (e.g., younger siblings used reward power for the personal domain and elaborated information for the moral domain). This study reveals both novel and complex details about how children develop social knowledge through informal familial interactions.

Contextual Elements of Family Conflict: Power, Topic and Social Domain

A key issue in the study of children's close relationships (i.e., parent-child, sibling) is the process of self and social evaluation, which is defined as the resources that children use towards acquiring social understanding (Dunn, 1993). During children's relationship interactions, each partner (i.e., parent, sibling) has access to a variety of influential behaviours (i.e., power resources), which can vary by the individual and social context (see Study 1; Kuczynski & Navara, 2006). A driving factor behind these exchanges is the influence of each individual's characteristics and schemas (Hartup & Laursen, 1991), where each actor develops their own understanding of their social world.

As children create social schemas about how the world works through everyday family communication, conflicts naturally arise (Tesla & Dunn, 1992). Fights between family members revolve around a variety of topics, including valued resources, controlling others' behaviours, rule violations, manners, and facts and truth (Dunn & Munn, 1987; Shantz, 1987). In addition, family members may perceive that conflict topics comprise multiple social domains, including personal, moral, conventional, and prudential (Smetana, 2006; Turiel, 1983, 2006). Considering that children are not isolated and self-sufficient, but are actors in their own right, able to influence and be influenced by others (Radke-Yarrow, Richters, & Wilson, 1988), it is imperative to understand their development as active agents in the socialization process. The construct of agency acknowledges that children have their own individual ideas, beliefs, and knowledge about their social environment (Cummings & Schermerhorn, 2003). Power can be utilized to target children's agency as they are able to influence their environment.

Although extensive work has examined family communication during dyadic family interaction such as parent-child and sibling exchanges (e.g., Abuhatum & Howe, 2013; DeHart, 1999; Della Porta & Howe, 2013; Howe, Rinaldi, Jennings, & Petrakos, 2002), less attention has been devoted to polyadic (i.e., triadic, quadratic) family interaction (Eichelsheim, Deković, Buist, & Cook, 2009). Nevertheless, the study of polyadic conflict is qualitatively different than dyadic conflict in that the addition of a third family member in a dispute can change both the process and outcome of the conflict interaction (Vuchinich, Emery, & Cassidy, 1988). For instance, behaviours executed by children during sibling conflict differ when a parent becomes involved (Howe, Fiorentino, & Garipey, 2003). In addition, work relating to social domain knowledge has been informative based on adolescent-parent conflicts (e.g., Smetana, 1989; Smetana & Asquith, 1994), yet there appears to be a lack of empirical research in this area based on young children's conflict interactions. As such, taking a quantitative look at family conflict not only allows for better understanding of polyadic interaction processes, but also allows for further interpretation of children's social knowledge development through such interactions (Gjerde, 1986; Leaper, Anderson, & Sanders, 1998).

As such, the aim of this study was to identify the conflict roles taken on by each family member, the topics being argued, as well as to understand the execution of power resources by parents and children during polyadic family conflict as it varies by social domain. These research questions allow for a deeper understanding of children's effect on their environment (i.e., agency) as well as a window into how children develop social knowledge (or schemas) through informal family interactions.

Family Systems

The family systems approach depicts relationships from the perspective of dyads and families as an organized system (Minuchin, 1988; Sroufe & Fleeson, 1988; Stevenson-Hinde, 1988). Primarily, this model describes relationships as represented by wholeness, organization and circularity, where the family is a complex, integrated whole, with organized patterns of interactions (i.e., feedback loop). Further, the interdependence of system elements, where individuals and relationships are interdependent subsystems within an organized whole, contribute to the formation of patterns and that organize their behaviour by their participation in those patterns. Finally, homeostasis and change are considered to be part of the unified process. This system shares a close physical proximity, tasks, and long-term commitment, thus fostering conflict and allowing children to learn about of their social world (Emery, 1992).

Conflict

In abstract terms, conflict is defined as a mismatch between separated parts (i.e., contradictory ideas, thoughts and understanding about the world; Valisner & Cairns, 1992). Piaget (1962; 1973; 1985) accounts for the differentiation, reorganization, and hierarchical integration of information throughout the dispute. This idea purports that conflict is needed for a child to operate in concert with others, to cooperate, and foster their cognitive development (Shantz, 1987). In concrete terms, conflict is the verbal or behavioural incompatibility in goals that is expressed when one person explicitly opposes another person's actions or statements (DeHart, 1999; Shantz, 1987, Vuchinich, 1987).

A variety of positive developmental outcomes have been identified in the process of conflict between children and their parent or sibling. For instance, the development of

self-regulation (Vaughn, Kopp, & Krakow, 1984) and autonomy (Kuczynski, Kochanska, Radke-Yarrow, & Ginius-Brown, 1987) are enhanced as a result of conflict. Although research shows the positive side of dyadic conflicts, there appears to be a lack of understanding of the conflict process during polyadic family conflicts. According to family systems and developmental theorists, polyadic conflicts are a better representation of basic interaction than dyadic conflicts (Minuchin, 1985; Sameroff, 1983; Vuchinich et al., 1988).

Given the importance of studying children's interactions in the family at the polyadic level of interaction, there seems to be a lack of research in the area. This gap may be due to the complex nature of family interactions and its variability depending on the participants involved, content, intensity, and frequency of exchanges. In terms of content, family norms, such as equality and fairness, can help children to learn about the rights of others, sharing, and reciprocity (Ross, Filyer, Lollis, Perlman, & Martin, 1994). Further, family conflict can occur in multiple social domains, as discussed below (Smetana, 2006; Turiel, 1983, 2006). In particular, children may develop an understanding of moral and conventional rules through conflict with others (Dunn & Munn, 1985). The development of this social knowledge can be understood through the study of power (i.e., influential behavioural strategies) during conflict (Vuchinich, 1987), which provides a basis for the importance of assessing the types of power resources used by each party (Laursen & Pursell, 2009).

Power

Social power involves an individual's ability to have an effect on another person's attitudes, behaviours, and beliefs (Erchul & Raven, 1997; French & Raven, 1959). Wolfe

(1959) articulated three assumptions about the nature of individuals and interpersonal relations that provide a foundation for this conceptualization of social power: starting with the motivation towards satisfying one's desires and needs while aiming for specific goals; these goals are then attained through social interaction; and during these interactions there are continual exchanges of resources between actors. In effect, the resources that one has in their possession can be socially transferred to the other to meet specific objectives (see Study 2). Finally, the more resources one has in his or her control, and more importantly, the resources one utilizes to influence an individual, the more power one wields (see Study 1). In brief, individuals have the ability to initiate purposeful behaviour and strategically use power to influence others (Kuczynski & Parkin, 2007).

Power resources available to a family member during a conflict interaction include coercion (physical or verbal), reward (positive or negative), legitimacy, reference to one's relational ties, expertise, information (simple and elaborated), and questioning power (Dunn & Munn, 1987; French & Raven, 1959; Phinney, 2001; Wang, 2006). As many theorists state, power is subject to the social realm of bidirectional interactions between individuals and it has been argued that different types of power reside in both parents and children depending on context (e.g., Foucault, Kritzman, & Sheridan, 1988; French & Raven, 1959; Grieshaber, 2004; Kuczynski, 2003; Wolfe, 1959). Children's construction of social knowledge can thus be understood through the social-cognitive domain perspective of moral and social development (Smetana, 2006; Turiel, 1983, 1998).

Social Domains

Social domain theory states that children create varied forms of social knowledge and perceptions of dyadic interactions (Smetana, 1999). They learn about these through experience with parents, teachers, peers, and siblings. Parents portray these knowledge systems in their communications with children and children construct different social knowledge systems. The following domains fall under the umbrella of social knowledge acquisition: (a) moral issues encompassing concerns for justice, welfare, or rights, (b) conventional issues involving authority, tradition, or social norms, (c) personal topics regarding one's privacy, bodily integrity, or control (e.g., choice and preferences), which is an important feature in the development of autonomy, and (d) prudential concerns consisting of safety, harm to self, comfort, and health. Social domains can co-occur, for example, a social issue can involve both prudential and moral properties (an act that can be harmful to self and others). Via children and parents' use of power during family conflict, social expectations and rules in differing social domains can be enforced.

Social domain research has examined differing properties of relationship interactions, such as conflict (e.g., Smetana, 1989), rules and regulations (e.g., Sorkhabi, 2010), disclosure (e.g., Smetana, Villalobos, Tasopoulos-Chan, Gettman, & Campione-Barr, 2009), and conceptions of parental authority (e.g., Smetana, 1988). For instance, during conflict, Smetana (1989) reported that although parents and children agree about the causes of their conflicts, they differed on the interpretation of the conflicts. Parents were perceived to have greater jurisdiction and authority in moral and conventional issues than personal issues (Smetana, 1989; Smetana & Asquith, 1994), which changes with adolescents' age (Smetana, 1988). Moreover, Della Porta and Howe (2012) recently

studied mothers and school-aged children's perceptions of the types of power executed (i.e., coercive, reward, legitimate, information, negotiation, and sneaky; French & Raven, 1959) in three social domains (personal, conventional, and prudential) during dyadic conflict. They reported that mothers were perceived as using more coercive power in the conventional domain and more information power across all domains than children. Further, children were viewed as exercising more reward power in personal and prudential domains and more legitimate power in the personal domain. This study provides preliminary knowledge of conflict resources utilized between mothers and their children in differing conflict scenarios.

Although this research is helpful in understanding how different relationship properties differ by social domain, less is known about the differentiation of behavioural patterns in conflict across domains in early childhood. This information can further our understanding of how children's knowledge of the social world develops. As argued by social domain researchers, to appropriately study children's development as it occurs through bidirectionality in social interactions, it is crucial to take into account children's domains of thought (Nucci, 2001; Smetana, 2006; Turiel, 1983, 2002).

In brief, children reason in differing ways depending on the social domain they perceive (Smetana, 2006). For instance, compared to the conventional or personal domain, children respond more to moral issues in an affectively negative fashion. To our knowledge no studies have investigated the types of issues that occur during naturalistic polyadic family conflict, a goal of the present study.

In addition, although a conflict issue (e.g., fairness) may revolve around the moral social domain this may not directly indicate that a child or parent views the situation or

argues towards moral knowledge. It may be that as children perceive the issue as personal, they may argue their case with personal content and references. In turn, parents may view the situation as moral and make moral arguments and references. This study aims to identify, through observational behavioural coding, the topics of polyadic conflict, each actor's argumentation relating to different social domains, and use of power techniques.

Clearly, the study of power through conflict is multidimensional; whether the conflict revolves around a parent's concern that their child does not want to eat their vegetables (prudential) or siblings' dispute over the sharing of a toy (moral), the developmental implications of conflicts may be similar, but the process and outcome can be quite different (see Study 2). Children have conflicts over a wide range of issues in differing social domains and use a wide array of strategies to achieve their goals depending on the actors involved, who initiated the opposition, and the issue at hand.

The Present Study

Although many researchers have paved the way for advancing our understanding of dyadic conflict, its process and outcome in relationship interactions (e.g., Hartup & Laursen, 1993; Howe et al., 2002; Perlman & Ross, 1997; Study 2), less focus has been directed to polyadic family conflict interactions. Further, the interplay between conflict roles, conflict topic, each actor's use of power and social domains are key features that must be considered together given the complexity of the family system (Minuchin, 1988; Sroufe & Fleeson, 1988; Stevenson-Hinde, 1988). During family conflict, depending on how it was initiated and the topic being argued, children may have differing goals than

parents. This study used naturalistic observations of family interactions in their home as a window into understanding children's informal learning contexts.

The following guiding questions and respective hypotheses were posed. First, do certain family members take on different roles in polyadic conflict sequences (i.e., initiator, combatant, additional party)? Second, what are the topics that start a family conflict? No hypotheses were made for these queries due to the lack of research on multi-party family conflicts. Third, what is the most common social domain referred to by parents and children in polyadic conflict? We expected that parents will reference moral and conventional domains more than personal domain (Smetana, 1989; Smetana & Asquith, 1994), while children will refer to personal and prudential issues more than moral and conventional issues (Smetana et al., 2009). Fourth, do references to social domains vary by actor and topic? The only prediction advanced here was that for topics concerning social or house rules, parents will refer to conventional and moral domains more than the personal domain (Sorkhabi, 2010). Finally, do parents, older siblings and younger siblings argue their case with different power resources in relation to certain social domain conflicts? It was hypothesized that parents will use coercion in conventional domains more than moral and personal domains and other power strategies will be used equally across all domains. We expected that children will use more reward power in moral domains followed by personal and prudential domains, and more legitimate power with the personal domain (Della Porta & Howe, 2012; Smetana, 2006).

Method

Participants

Thirty-nine lower and middle-class Caucasian nuclear families (two siblings, mother, father) were recruited from a medium-sized industrial city in southwestern Ontario, Canada. This previously collected data aimed to understand sibling interactions in the home setting and as such, naturalistic observations were conducted (Ross, Filyer, Lollis, Perlman, & Martin, 1994). The two focus children were approximately 4- and 6-years of age, older siblings' ages ranged from 5.4 - 7 years ($M = 6.3$ years, $SD = .42$) and the younger siblings' ages ranged from 3.8 - 4.7 years ($M = 4.4$ years, $SD = .21$); M age gap = 1.94 years, $SD = .28$ (range = 1.4 to 2.5 years). Parents' age (mothers' $M = 32.8$ years; fathers' $M = 34.6$ years) and educational levels varied: university degree = 29%, college program = 15%, high school diploma = 41%, and no high school diploma = 15%.

Procedure

To gain a clear picture of naturalistic interactions between family members in their home, sessions were conducted by an observer who had previously developed rapport with the family. Sessions were organized so that limited distractions were present that may have reduced family interaction (e.g., no interaction with the observer and no television or video games were permitted). During the sessions, the observer followed the children and described all child-child interactions and all parental behaviour related to children's interactions onto one track of a stereo tape recorder. The second track recorded the family members' speech. Both were then transcribed for coding purposes.

A total of 241 90-minute sessions were collected; most families ($n = 32$) were observed for six sessions, while some for seven sessions ($n = 7$). Verbal and physical action codes of each family member's behaviour towards one another (e.g., take, request action, protest) were identified as well as the context of the interaction (e.g., game,

pretense, conflict); the content of the speech and a description of their actions were transcribed. Reliability on ten 20-minute observations was established with a percent agreement for the presence of each coded action of 86%, each actor of 88%, as well as the context for sequences of interaction of 95%.

Conflict Sequence Identification

Using each transcribed session, previously identified conflict sequence codes were found and checked for the inclusion of three or more parties acting in the conflict (i.e., minimum of one behaviour move per actor) and checked for consistency with our definition of conflict. In particular, we used the conflict definitions that involved a verbal or behavioural incompatibility in goals, expressed when one person explicitly opposes another person's actions or statements (DeHart, 1999; Shantz, 1987; Vuchinich, 1987). Family conflicts included (a) when siblings initiated a dispute and the parent entered as an additional party or (b) a parent-child disagreement where a additional party (parent or child) entered. Any conflicts involving the observer or the tape recorder were deleted. These conflict sequence identification procedures resulted in a total of 210 family conflict sequences ranging from 3-320 lines ($M = 29$ lines per sequence).

Coding

Conflict context. In the present study, the conflict context coding scheme was based on the modification of several rubrics (DeHart, 1999; Howe et al., 2002; Ross et al., 1994; Shantz, 1987; Vuchinich et al., 1988). Conflict context coding included: (a) conflict roles (i.e., initiator, the actor who causes a conflict by opposing another; combatant, the person on the receiving end of the opposition; additional party, who gets involved in the conflict); and (b) topic (i.e., conflicting information, controlling

behaviour, obnoxious behaviour, ownership or rule violation; see Table 1). Codes for each conflict sequence were mutually exclusive and exhaustive. Reliability on 30% ($n = 63/210$) of sequences resulted in the following *kappa* values: initiator = .95; combatant = .97; third party = .98; fourth party .92; and topic .83.

Power. Power categories were based on French and Raven's typology of power and other supporting literature on interpersonal communication (Phinney, 2001; Dunn & Munn, 1987; Wang, 2006). Types of power included: (a) coercion (i.e., positive and negative punishment), (b) reward (positive and negative reinforcement), (c) legitimacy (i.e., reference to authority, personal rights including moral principles and preferences), (d) referent (i.e., maintenance of a positive relationship), (e) expert (i.e., superior knowledge), (f) information, which was split into simple (i.e., demand or direct instruction) and elaborated (i.e., justification or reasoning) and (g) questioning (i.e., clarification, forced choice or open-ended) (see Table 1).

Power moves were coded microscopically, in that each influential actor move within a conflict sequence was coded and data were entered with the respective actor who used that type of power. Noninfluential behaviours unrelated to the conflict were not coded. Reliability was obtained on 20% of the conflict sequences ($n = 42/210$); *kappa* values were: coercion = .91; reward = .99; referent = 1.00; legitimate = .77; expert = 1.00; simple information = .80; elaborated information = .86; questioning = .91.

Social domain. The social domain coding scheme was based on definitions and examples from previous research (Smetana, 1999; Smetana, 2006). Each actor's argument was assessed as relating to one social domain including moral, conventional, personal, and prudential (see Table 1 for definitions and examples). One social domain

per actor was coded per family conflict sequence (i.e., codes were mutually exclusive and exhaustive). For example, if the older sibling complained that her hot chocolate was too cold after the mother added milk, the social domain code would be personal, however the combatant (i.e., the mother in this case) was coded as conventional as she stated that the child had asked for milk and therefore had to be responsible for her own actions.

Reliability was obtained on 22% ($n = 47/210$) of the conflict sequences and *kappas* were: overall = .83; mother = .76; father = .78; older sibling = .71; and younger sibling = .77.

Results

The analyses are based on a sample of 210 conflict sequences identified during naturalistic family interactions in the home setting. A total of 35/39 families engaged in polyadic conflict, and sequences were collapsed per family, as this was the unit of analysis. Multiple combinations of family conflict were observed including 3-party (i.e., mother with two children = 108; father with two children = 37; mother and father with one child = 22) and 4-party interactions (i.e., mother, father and two children = 44). Mother and father actions were merged into one parent category, as the father was involved in half of the sequences in comparison to the mother. In terms of use of power, referent and expert power were used infrequently, thus were excluded from analyses. In addition, the prudential domain was rarely alluded to for social domain argumentation, and therefore data regarding this domain were also excluded from the analyses.

Identification of conflict context (i.e., actor role, topic), social domain, and power, as well as interactions between topic and social domain, and power and social domain, are displayed below. Conflict topic, social domain and power descriptive statistics are

presented in Table 2. Each analysis employed appropriate proportion scores and the Bonferroni correction was utilized for each repeated measures ANOVA.

Conflict Roles

Proportion scores were calculated to identify the conflict roles taken on by each actor by dividing each role by all possible roles for each actor (e.g., parent initiator/ (parent initiator + parent combatant + parent additional party)). A 3 (actor) by 3 (role) repeated measures ANOVA showed a significant interaction, $F(4, 31) = 9.67, p < .001, \eta^2 = .56$. Simple effect tests revealed that parents were more likely to enter a conflict as an additional party than as an initiator or a combatant, older children were more likely to initiate a conflict and be a combatant than an additional party, and younger children were equally likely to enter as an initiator, combatant or additional party (see Table 3).

Social Domain

The prudential social domain was referenced infrequently and so this variable was removed from analyses. Proportions scores for comparing social domains involved dividing total references to each social domain, regardless of actor by all references to social domains (e.g., conventional domain/conventional + moral + personal). Based on a repeated measures ANOVA comparing social domain argumentation, a significant main effect, $F(2, 33) = 13.02, p < .001, \eta^2 = .44$, indicated that family members referred to the personal domain ($M = .47, SE = .03$) more than conventional ($M = .24, SE = .03$) and moral domains ($M = .29, SE = .04$).

To assess which social domain each actor was most likely to use during arguments, proportions scores were calculated for each actor by dividing their reference to each social domain by all references to social domains (e.g., parent conventional

domain/conventional + moral + personal). To compare each actor's reference to each social domain, a 3 (actor) x 3 (social domain) repeated measures ANOVA was implemented. Mauchly's test of sphericity was violated for the interaction, $\chi^2(9) = 22.14$, $p < .01$. Correcting for the degrees of freedom with Greenhouse-Geisser estimates ($\epsilon = .82$), findings displayed a significant interaction, $F(3.28, 108.22) = 39.19$, $p < .001$, $\eta^2 = .54$. Simple effect comparisons showed that parents were more likely to refer to the conventional and moral than the personal domain, while older and younger children mostly referred to the personal domain followed by moral domain and least frequently to conventional in comparison to both the personal and moral domains (see Table 3).

Topic

A repeated measures ANOVA was conducted to test which topic was most likely to occur in family conflict. Results revealed that Mauchly's test of sphericity was violated for the main effect of topic, $\chi^2(9) = 31.80$, $p < .001$. Correcting for the degrees of freedom with Greenhouse-Geisser estimates ($\epsilon = .75$), findings displayed a significant interaction, $F(3.01, 102.32) = 4.35$, $p < .01$, $\eta^2 = .11$. Family conflicts were more likely to be about obnoxious behaviour ($M = .36$, $SE = .05$) than information ($M = .08$, $SE = .02$), while controlling actions ($M = .17$, $SE = .04$), ownership ($M = .17$, $SE = .04$) and rule violations ($M = .22$, $SE = .05$) were equally likely to occur.

Topic by Social Domain

The following results present topic by social domain interactions for each actor. Considering that parents referred to personal domains and children referred to conventional domains less than 10% of the time, these domains were not analyzed. Proportions scores were calculated for each actor by dividing the cases in which each

topic and social domain was used in conjunction with one another by total references to each social domain (e.g., information using conventional arguments/total topics using conventional arguments) (see Table 4).

Parent. In relation to parents' use of social domain argumentation for each topic a 5 (topic) by 2 (social domain) repeated measures ANOVA was analyzed. Mauchly's test of sphericity was violated for the interaction, $\chi^2(9) = 22.80, p < .01$. Correcting for the degrees of freedom with Greenhouse-Geisser estimates ($\epsilon = .61$), findings displayed a significant interaction, $F(2.45, 51.43) = 5.97, p < .01, \eta^2 = .22$. Simple effect comparisons indicate that for controlling issues and rule violations, parents used conventional arguments more than moral arguments. However, when the conflict was about ownership, parents referred to the moral domain more than the conventional domain.

Older siblings. The same analysis was conducted as above, which indicated a significant interaction between topic and social domain, $F(4, 15) = 3.77, p < .05, \eta^2 = .50$. Simple effects indicated that for conflicting information and obnoxious behaviour, older children were more likely to argue by referencing personal issues, while for ownership, they were more likely to use moral arguments than personal ones.

Younger siblings. Analogous analyses were implemented as in the two previous sections, but revealed no significant interaction between topic and the moral and personal social domains for younger siblings. Only one difference was revealed in simple effect tests where, like older siblings, younger siblings were more likely to use moral arguments for the topic of ownership than personal arguments.

Power by Social Domain

The final set of findings revealed the analyses for power by social domain interactions for each actor. As conducted above, parents' references to personal domains and children's references to conventional domains were not included based on their infrequent use. Proportion scores were calculated for each actor by dividing the cases in which each power was used to argue with each social domain by total references to each social domain (e.g., coercive power with conventional argumentation/ all types of power using conventional argumentation) (see Table 5).

Parent. In terms of parents' use of power to argue their case for conventional and moral domains, a 6 (power) by (2) (social domain) repeated measures ANOVA was conducted. Findings showed that Mauchly's test of sphericity was violated for the interaction, $\chi^2(14) = 55.72, p < .001$. Correcting for the degrees of freedom with Greenhouse-Geisser estimates ($\epsilon = .61$), findings displayed a significant interaction, $F(3.05, 61.02) = 3.39, p < .05, \eta^2 = .15$. Simple effects showed that parents used legitimate power more in conjunction with conventional than moral arguments, while they employed elaborated information power more with moral than conventional issues.

Older siblings. There was no significant interaction after correcting for the degrees of freedom with Greenhouse-Geisser estimates ($\epsilon = .58$) as Mauchly's test of sphericity was violated for the interaction between power and social domain, $\chi^2(14) = 36.61, p < .01$. There was, however one trend ($p = .06$) in that older children were more likely to reference legitimate power for moral arguments than personal arguments.

Younger siblings. As for older children, Mauchly's test of sphericity was also violated for the interaction between power and social domain, $\chi^2(14) = 30.90, p < .01$. Correcting for the degrees of freedom with Greenhouse-Geisser estimates ($\epsilon = .58$),

revealed a significant interaction, $F(2.90, 34.77) = 4.04, p < .05, \eta^2 = .25$. Simple effects showed that younger children were more likely to use reward power in arguments about personal rather than moral issues and were more likely to use elaborated information power for moral rather than personal issues.

Discussion

This research focused on the complexity of family interactions during polyadic conflict as it arose in the natural home environment. Specifically, to gain a deeper understanding of how children have learned to deal with their social world during informal contexts, each actor's role in the conflict, their argumentation using different social domains, the topic under argument, and use of power were identified and analyzed.

Conflict Roles

As the family system encompasses wholeness with an organized circular pattern of interactions, it is imperative to learn about the specific members' roles during conflict (Minuchin, 1988; Sroufe & Fleeson, 1988; Stevenson-Hinde, 1988). During polyadic interactions, two actors typically begin the conflict with one actor (i.e., initiator) opposing the other actor's behaviour (i.e., combatant), and a third party (i.e., additional party) enters as an active intermediary or attempts to distract the combatants (Vuchinich et al., 1988). As one of the first studies to identify actor roles in family conflict, we found that older children were more likely to initiate and be a combatant than an additional party, while younger children were equally likely to enter a conflict as an initiator, combatant or additional party and parents were more likely to enter a conflict as an additional party. These results indicate that older children are more likely to start a conflict as the one causing the opposition with their negative behaviour as a combatant (i.e., breaks sibling's

castle or jumps on the couch) or as the initiator by resisting a negative behaviour (i.e., hits sibling because she took her toy or retaliates against mother who just asked him to clean up). However, the younger sibling was equally likely to enter a conflict in different roles (e.g., initiator, combatant, additional party), which may represent that children of approximately 4-years of age have developed a sense of agency, in that they attempt to control their environment by entering conflicts in a variety of ways. The older child being more involved in the initial dyadic conflict may indicate their superior control in relation to the younger sibling, analogous to the nature of their relationship (Dunn, 1993; Howe, Karos, & Aquan-Assee, 2011).

According to Study 2, the likelihood of winning a conflict by each actor was 54 percent for parents, 28 percent for younger siblings, and 18 percent for older siblings. This, along with conflict role findings, aids in mapping each actor's role in family conflict. In particular, as parents enter more often as an additional party and win most of the conflicts, it is clear that their hierarchical role and superior ability in relation to their children come into play. This matches the nature of parent-child interaction in that parents facilitate conflict resolutions by providing advice and support in dealing with social situations, and regulate opportunities for social and cognitive experiences (Parke & Buriel, 2006).

No matter what role is assumed by each family member, bidirectional relations are continuous where children are active members in their interactions and can learn from and influence others in conflict situations (Dunn, 2010). Future research on polyadic conflict should gain a more nuanced look at the process of how each actor becomes involved in conflict and how family members enter as additional parties based on

differing dyadic combinations of initial combatants in the confrontation. This information can aid in advancing theory on family systems, family conflict, and member interactions.

Social Domain

As children learn a great deal through informal family interactions, an investigation of how each actor during family conflict argues their case using different social domains can allow for the understanding of what knowledge is available for knowledge transfer (Smetana, 1999). As expected, parents were more likely to refer to the conventional and moral domains than the personal domain, thus supporting the literature (Smetana, 1989; Smetana & Asquith, 1994). Our prediction that children would refer to personal issues more than moral and conventional issues (Smetana et al., 2009) was partially supported in that children not only referred to the personal domain, but they also referred to the moral domain more than the conventional domain during polyadic conflicts. Based on previous research, children develop an understanding of moral and conventional rules through conflict, but if they are not arguing with conventional reasoning it may be that they are not actually aware that they are breaking a rule (Dunn & Munn, 1985). Further, personal and moral issues are more salient to children during early childhood and as such, they may learn about individuality and equality and fairness faster or prior to house and social rules (Ross et al., 1994).

These findings are in line with parents' role as socializers and children's development of autonomy during the early childhood years. Indeed, a primary goal of parenting is to teach children about rules and social-conventional norms as well as regulate opportunities for social and cognitive experiences (Parke & Buriel, 2006; Smetana, 1989; Tesla & Dunn, 1992). Research on parent-child interactions in early

childhood indicates that mothers give direct social messages to children about moral, conventional, and prudential events (Nucci & Weber, 1995). Further, it has been theorized that an arena of personal choice is central to the establishment of the child's sense of agency and individuality (Nucci & Lee, 1993). Given this, it is clear that children's learning in informal contexts, such as within the home, are crucial for the development of social understanding.

Although children referenced personal issues more than moral, it was found that moral issues were more salient than conventional issues, a novel finding. This may indicate that children are beginning to learn to defend their rights during polyadic conflicts, perhaps due to the presence of parents or to the involvement of a parent who uses moral arguments in the same conflict situation and thus, children are mimicking their arguments. This suggestion can be further investigated using contingency methods of analysis to identify how children imitate their parents' conflict interaction behaviours during polyadic conflict and in turn learn how to resolve conflict constructively, building on work by Rinaldi and Howe (2003). As the parent-child relationship is defined by a power asymmetry, it may be more difficult for children to overcome their egocentric tendencies, a necessity of independent moral reasoning, than it is to understand such issues in dyadic sibling conflicts, a more symmetrical relationship (Piaget, 1932). Future research can address what types of moral issues (e.g., physical harm, psychological harm, fairness/ rights violations) are argued about during conflict at the early childhood stage. This would allow for a detailed understanding of what kinds of moral reasoning have been internalized (Recchia & Howe, 2009).

Topic and Social Domain

Children engage in conflict over a wide range of issues such as valued resources, controlling others' behaviours, rule violations, and facts and truth (Shantz, 1987). Our study found that during polyadic conflicts, families were more likely to disagree about obnoxious behaviour than information, while controlling actions, ownership, and rule violations were equally likely to occur. Based on the topic of each conflict, we were interested in identifying how each actor argued their case.

Based on previous research (Smetana, 1989), parents and adolescents reported that they agreed on the topic of conflict but interpreted the meaning differently. Specifically, parents viewed issues such as household chores, behavioural style, and regulating their child's behaviour as respectively conventional, moral and prudential, while their adolescent children viewed these issues as all falling into the personal domain. Our research on polyadic family conflict revealed a similar finding in that there was a discrepancy between parents and children's view of the social domain for each dispute.

Our prediction regarding social or household rules, specifically that parents would refer to conventional and moral domains more than the personal domain (Sorkhabi, 2010), was null considering that parents referred to the personal domain infrequently. As such, analyses on parent's social domain did not include the personal domain. Nonetheless, when comparing conventional and moral domain references, parents referred more to the conventional domain for controlling actions and rule violations and more to the moral domain when the issue revolved around ownership. To our knowledge, this is the first study to look at social domain argumentation in regard to different conflict topics during early childhood and in turn these results can aid in our knowledge of how children develop awareness of their social world. For instance,

Gralinski and Kopp (1993) found that mothers of toddlers passed on social messages about harmful effects of moral transgression and encouraged prosocial behaviour. As children get older, parents utilize more sophisticated messages regarding harm (Gralinski & Kopp, 1993). In terms of conventions, mothers focus on commands during toddlerhood and focus on specific explanations of rules and expectations as children develop (Smetana, 1984). As argued by social domain researchers, to study children's development appropriately through bidirectionality in social interactions, it is crucial to take in to account children's domains of thought (Nucci, 2001; Smetana, 2006; Turiel, 1983, 2002). Future studies can build on Gralinski and Kopp (1993) and Smetana (1984) to identify what parents' approaches to socialization entails during conflict about moral and conventional issues. This will allow for a clearer picture of what children are exposed to when learning about their behaviour in different social domains.

As for children, comparisons were made only between the moral and personal domain, as the conventional domain was referenced infrequently. Regarding conflicting information and obnoxious behaviour, older siblings were more likely to argue from the personal domain perspective, while for ownership, they were more likely to use moral arguments. Younger siblings were also more likely to use moral arguments for the topic of ownership than personal arguments, but there was no pattern evident for other conflict topics and social domain argumentation.

These results afford a more nuanced examination regarding how each actor viewed each topic and illuminates their social understanding during polyadic conflict. This information can, in turn, aid in the understanding of key aspects of family development in the social environment. As Piaget (1932) suggests, children develop

social cognitive understanding through reciprocal social interactions with their siblings of equal social power, as well as Turiel's (1998) stance on gaining knowledge from both parents of higher power and siblings of equal power. Future research can identify specific interactions towards gaining knowledge in domains of morality, social convention, and personal autonomy which are distinct concepts developing during early childhood (Nucci, 2001; Turiel 1998).

Power and Social Domain

The development of social knowledge can be understood through the study of power in that children develop differentiated social judgments and reasoning skills for different social issues (Grusec & Davidov, 2010). As many other observational studies show, domains of social thinking are associated with different types of social interactions (Killen & Smetana, 1999; Nucci, Turiel, & Encarnacion-Gawrych, 1983; Tisak, Nucci, & Jankowski, 1996). This study supports the literature noting that each actor in family conflict argues for differing social domains by employing certain types of power over others; more specifically, each actor argued their case differently by using different influential power behaviours for each social domain. In particular, parents used legitimacy power moves more during their conventional domain than moral domain arguments and they used reasoning and justification (i.e., elaborated information) more for moral argumentation than conventional, counter to expectations. These types of parental power behaviours regarding disputes about moral and conventional issues are consistent with authoritative parenting styles, considered the most desirable method of parenting for facilitating children's optimal social and cognitive development (Parke & Buriel, 2006). This type of parenting involves the combination of reasoning, negotiation,

and power assertion, which as is evident in our study, reflects the parent's use of legitimate authority and justifications as salient for referencing moral and conventional issues (Baumrind, 1971; Larzelere, Cox, & Mandara, 2013).

The only finding for older siblings was a trend indicating that they were more likely to reference their legitimacy towards moral arguments than personal arguments. Whereas, younger siblings were more likely to use reward power (i.e., whining and crying) in arguments about personal issues and they were more likely to use elaborated information for moral arguments. Our hypothesis based on Della Porta and Howe (2012), that younger siblings would use negative affective behaviours towards the moral domain followed by the personal domain was not supported. This discrepancy may be due to the differing age groups under study (i.e., early childhood versus school-age participants) and methodological issues (i.e., hypothetical scenarios versus naturalistic observations). However, our findings supported research on sibling conflict demonstrating that younger siblings were more likely to attribute feelings of sadness during conflict than older siblings (Recchia & Howe, 2009). At age four, it may be that children either favour immature methods of communication (e.g., whining), or perhaps they have less control over the course of interactions than their older siblings (Buhrmester & Furman, 1990; Chang & Thompson, 2010) due to their less than sophisticated cognitive skills.

In essence, family interactions are a clear context for children's informal learning of how to get along socially with others (Grusec & Davidov, 2010). Future research can identify patterns of relationship quality within the family and map such qualities onto different members' method of influential behaviours (i.e., power). In fact, it has been argued that positive relationships between parents and children as well as siblings may

engender a context that allows for more positive interactive behaviours, which in turn are associated with fostering the internalization of appropriate personal, moral, and conventional behaviours (Grusec, Goodnow, & Kuczynski, 2000). Another question would be to assess the content of parents' use of legitimacy and elaborated information as well as longitudinally compare siblings' behaviour to learn the most effective means of internalization (Hoffman, 2000). Longitudinal methods can also illuminate our understanding and knowledge regarding short-term and long-term changes not only behaviour (see Study 2), but also beliefs and values during the process and outcome of conflict.

Conclusion

A few limitations of this study include the small sample, which naturally affects the statistical power of the analyses, and the findings may not generalize beyond the Caucasian, middle-class, nuclear, intact families studied. Nevertheless, our study provides a novel and complex view of how informal polyadic family conflicts not only provide a look into how children interact in their social environment, but can also serve as a platform from which future research can identify desirable methods of socialization in differing domains. In brief, we have provided a window into the topics of polyadic interactions, how topics of conflict relate to each actor's argument towards differing social domains, and the types of power actors utilize in a conflict towards supporting their dispute for social domains. Future endeavours regarding this research area can further the investigation based on Piaget's (1962; 1973; 1985) suggestion to study differentiation, reorganization, and hierarchical integration of information throughout a dispute. With findings of this present study, future studies can continue to develop a

repertoire of methods of knowledge development leading to children' s self-regulation (Vaughn et al., 1984) and autonomy (Kuczynski et al., 1987).

Table 1

*Definitions and Examples of Conflict Topic, Power Coding, and Social Domain Coding**Conflict Topic Categories*

Topic	Definition	Examples
Conflicting information	Disagreement on ideas, facts, or opinion	Y: "Being 4 is older than being 3 years old"; O: "No this is a fox"; O: "You're laughing at me", Y: "No, I'm not"
Controlling behaviour	Topics involving bossing or giving orders; controlling an individual's behaviour	M: "No more, you can't read them all; O: "Yea"; M: "No.../you got all those other books, that's enough"
Obnoxious behaviour	Provocative behaviour, social intrusiveness, destructive acts, threats, offensive (swearing), aggression	F: "Don't jump up anymore, o.k"?; O: "Yes, I want to sit on you"; F: "Somebody is going to get hurt again"; M: "No yakking or fighting"
Ownership	Valued resources/personal property/Possessions (objects & space)	M: "Santa Claus brought it for you and Sherry for Christmas"; O: "Mom, Santa Claus just gives it to one"; M: "No, he gave this game to each of you"
Rule violation	Violation of social rules or rules in games	F: "You need two balls", Y: "No, we need one ball"; F: "You have to finish your meal", O: "He didn't wipe up his mess"

Power Coding Scheme

Type of Power	Sub-Categories	Definition	Example
Coercive	Physical	Use of physical coercion/force	Push, take
	Verbal/non-verbal	Verbal/nonverbal threats	"I'm gonna throw Snuffleupagus"
Reward	Positive	Use of positive conditions	"You could win all

		towards desired outcome	the marbles if you play”
	Negative	Use of negative conditions towards desired outcome	Whining, begging
Legitimate	Moral Principle	Defending the rights of yourself or another person	“No fair”; “Hurting people is wrong”
	Authority	Using rights of social hierarchy or belief that authorities are to be obeyed	“You have to put the crayons back right now”
	Preference	Having the right or opportunity to choose or assert one’s desire	“I need that stick to make a star”; “I don’t want it”
Referent		Ability to influence others because with respect, admiration, or likability	“I wish you weren’t my mommy”
Expert		Refers to one’s superior knowledge or ability	“This is how you it. mom told me”
Information	Simple	An instance of a demand without explanation	“Give me the guy”
	Elaborated	Using behaviour or feelings, social rules, consequences or object as justification	“I can’t drink this hot chocolate, it’s too unpleasure”
Questioning		Includes affirmation, when, where, why, and alternative questions	“Why did you do that?”; “Who wrecked the tower?”

Social Domain Categories

Social Domain	Definition	Topics/Examples
Moral	Concerns how people should be treated or behave towards others. Involves concern for others’ welfare, trust, justice, rights, fairness, and property.	Lying, sharing, hitting, cheating, tattling, or treatment of sibling.
Conventional	Regards appropriate behaviour deemed by society or culture. Includes appeals to authority, social norms and rules, politeness, manners, responsibility and being responsible for one’s own actions.	Eating food with fingers, speaking out of turn, disrespecting parents or siblings, following rules to a game, cursing, or chores.

Personal	Entails personal autonomy, personal preferences, and distinctiveness from others. Encompasses personal choice, such as controlling one's actions, giving orders and preferences.	Choosing one's clothing, friends, activity privacy, plans for play, or directives for personal preference.
Prudential	Involves regulating actions that have physical consequences to self and others. Also includes harm to self, safety, comfort and health.	Bedtime, using objects in a dangerous way or using objects the wrong way that can lead to harm.

Table 2

Descriptive Statistics for Social Domain, Topic and Type of Power

	Min	Max	Frequency	<i>M</i> (<i>SE</i>)
Topic				
Information	0	6	28	.80 (1.47)
Controlling	0	6	38	1.09 (1.62)
Obnoxious	0	9	71	2.03 (2.33)
Ownership	0	5	34	.97 (1.36)
Rule Violations	1	12	39	1.11 (2.08)
Social Domain				
Conventional	0	28	165	4.71 (5.61)
Moral	0	15	167	4.77 (4.66)
Personal	0	33	310	8.86 (9.62)
Type of Power				
Coercion	0	79	872	24.91 (20.13)
Reward	0	68	478	13.66 (17.63)
Legitimate	0	102	968	27.66 (27.40)
Simple Information	2	213	1299	37.11 (44.21)
Elaborated Information	3	215	1292	36.91 (41.41)
Questioning	1	88	514	15.57 (18.72)

Note: Statistics are based on the total identified topic, social domain, and power move per family. Prudential social domain and referent and expert power were excluded from analysis due to their infrequent use.

Table 3

Conflict Role and Social Domain by Actor

	Parent	Older Sibling	Younger Sibling
	<i>M (SE)</i>	<i>M (SE)</i>	<i>M (SE)</i>
Conflict Role			
Initiator	.19 (.04) ^a	.40 (.05) ^a	.41 (.05)
Combatant	.31 (.04) ^b	.41 (.05) ^b	.25 (.05)
Additional Party	.51 (.05) ^{ab}	.19 (.03) ^{ab}	.34 (.05)
Social Domain			
Conventional	.55 (.06) ^a	.06 (.02) ^a	.07 (.03) ^a
Moral	.35 (.05) ^b	.26 (.05) ^a	.22 (.05) ^a
Personal	.10 (.04) ^{ab}	.68 (.05) ^a	.71 (.06) ^a

All $p < .05$

Note. Superscript letters represent where the significant differences lie between each actor each type of additional party role (e.g., “a” is significantly different than “a”). Means and standard deviations are based on the proportion of references to social domains per actor.

Table 4
Conflict Topic by Social Domain

Topic	Parent		Older Sibling		Younger Sibling	
	Convention	Moral	Moral	Personal	Moral	Personal
	<i>M (SE)</i>	<i>M (SE)</i>	<i>M (SE)</i>	<i>M (SE)</i>	<i>M (SE)</i>	<i>M (SE)</i>
Information	.10 (.03)	.10 (.04)	.03 (.02) ^a	.16 (.04) ^a	.12 (.08)	.15 (.08)
Controlling	.31 (.07) ^a	.07 (.05) ^a	.15 (.07)	.15 (.04)	.06 (.04)	.18 (.06)
Obnoxious	.32 (.06)	.43 (.08)	.24 (.07) ^a	.47 (.08) ^a	.29 (.10)	.36 (.08)
Ownership	.08 (.03) ^b	.35 (.08) ^b	.42 (.09) ^b	.10 (.04) ^b	.42 (.12) ^b	.09 (.05) ^b
Rules	.19 (.04) ^b	.05 (.03) ^b	.15 (.06)	.12 (.05)	.11 (.05)	.22 (.08)

a = $p < .05$; b = $p < .01$

Note. Superscript letters represent where the significant differences lie between each set of social domain comparisons by actor per topic (e.g., “a” is significantly different than “a”). Means and standard deviations are based on the proportion of references to social domains per actor.

Table 5

Power by Social Domain

	Parent		Older Sibling		Younger Sibling	
	Convention	Moral	Moral	Personal	Moral	Personal
	<i>M (SE)</i>	<i>M (SE)</i>	<i>M (SE)</i>	<i>M (SE)</i>	<i>M (SE)</i>	<i>M (SE)</i>
<hr/>						
Power						
Coercion	.13 (.02)	.12 (.02)	.22 (.04)	.22 (.03)	.17 (.06)	.23 (.03)
Reward	.02 (.01)	.01 (.00)	.06 (.02)	.09 (.02)	.08 (.03) ^b	.31 (.05) ^b
Legitimate	.22 (.02) ^b	.13 (.02) ^b	.18 (.04) ^t	.11 (.03) ^t	.17 (.06)	.08 (.03)
Simple Information	.30 (.03)	.27 (.03)	.21 (.03)	.29 (.06)	.20 (.08)	.17 (.03)
Elaborated Information	.21 (.03) ^a	.31 (.04) ^a	.29 (.04)	.22 (.03)	.36 (.09) ^a	.15 (.04) ^a
Questioning	.12 (.02) ^a	.17 (.03) ^a	.04 (.02)	.07 (.02)	.03 (.01)	.05 (.02)

$a = p < .05$; $b = p < .01$; “t” = $p < .10$

Note. Superscript letters represent where the significant differences lie between each set of social domain comparisons by actor per type of power (e.g., “a” is significantly different than “a”). Means and standard deviations are based on the proportion of references to social domains per actor.

General Discussion

This research program touches upon a crucial aspect of the study of children's social development, namely the use of power in the family system. These studies advance the field in two novel ways; first, by using the concept of power in order to gain insight into parents' and children's influential behaviours; and second, by assessing power in the context of polyadic family conflict (involving three or more parties). These methods allow for a detailed investigation into inter-familial interaction and communication.

The findings from the three studies provide support for the family systems theory (Minuchin, 1988, 2002), the transactional model of development (Sameroff, 1975, 2009), and the social-constructivist theory (Carpendale & Lewis, 2006; Piaget, 1971; Vygotsky, 1978). We do so by displaying: (a) the variability in use of power by both the individual and relationship contexts; (b) the different means of studying power effectiveness by actor, family role, and sibling birth order; and (c) how power tactics, topics of conflict, and social domains can interplay in the process of conflict.

Taken together, these findings confirm the complex nature of the family system as constructed from different subsystems (i.e., parent-child, sibling) that are comprised of distinct boundaries and interaction styles (Minuchin, 1988, 2002; Sameroff, 1994). Further, the pattern of our findings reveal that family relationships are bidirectional, mutual, and continuous based on both individual agency and social experiences (Sameroff, 1975, 2009), and that children are active learners who cognitively create relational schemas about the world via social interactions (Piaget, 1971; Vygotsky, 1978).

Study 1: Use of Power in Family Conflict

The goal of the first study was to assess parents' and children's existing interactional schemas (Laible & Thompson, 2007; Maccoby, 2007) during the process of conflict. We did so by identifying each actor's influential power behaviours, including overall use of power, power as it varies by individual context (i.e., actor role, birth order, gender), as well as power variation by relationship context (i.e., relationship type, actor-target combinations). Overall the two types of power referenced most often were simple and elaborated information power, which makes conceptual sense based on the notion that simple refutes and demands are one of the primary modes of language communication (Demol & Buysse, 2008) and that elaborated information serves as a socially independent means to transfer reasoned argument (Raven, 1993).

However, the story became more complex when individual and relationship contexts were taken into account. To elaborate, coercive and reward power were more likely to be used by children, while questioning power was more likely to be used by parents. These findings may reveal what parents and children have learned based on a history of previous reciprocal interactions with one another (Chang & Thompson, 2010; Grieshaber, 2004; Lollis & Kuczynski, 1997). That is, parents and children may have gathered knowledge on which types of power are most likely to be influential towards others in achieving their goals. This social constructivist perspective denotes which types of powers have received positive feedback in the family (Carpendale & Lewis, 2006; Piaget, 1971; Vygotsky, 1978). In particular, these findings may be related to the capabilities of both children and parents, where use of aggression and negative reward require less sophisticated cognitive skills and abilities (Kuczynski, 2003; Rinaldi &

Howe, 2003); whereas use of questioning is a cognitively sophisticated strategy that places the parent at a higher level of authority (Hargie & Dickson, 2004).

The relationship context as a means to assess power shows a different angle for how each actor uses power as an influential action. In the parent-child relationship, actors use legitimate, simple and elaborated information, and questioning power most often than actors in the sibling relationship. This may indicate that parents' constructive behaviours during conflict are being reciprocated by children (Rinaldi & Howe, 2003). In addition, differences in relationship properties, where the parent-child relationship is vertical and the sibling relationship is horizontal in nature, may give rise to such variations in power behaviours utilized during conflict (Laursen & Pursell, 2009).

Parsing the family in a more nuanced fashion by actor-target combinations (i.e., parent to child, child to parent, child to child) provides an even fuller picture of family complexity. We found that (a) coercive power was used more from parent to child and child to sibling than child to parent, (b) reward power was use more from child to sibling and to parent than from parent to child, (c) legitimate, simple information, and questioning power were used more from parent to child than other actor-target combinations, and (d) elaborated information power was used more from parent to child and child to parent than between siblings. These findings provide a more fine-grained understanding of reciprocated power behaviours and are indicative of power use based on relationship types (i.e., complementary and reciprocal). For instance, parents may utilize their inherent role and hierarchical status and children may use coercion in a reciprocal fashion towards their sibling (Dunn, 1993; Hinde, 1979).

Study 2: A Comparative View of Power Effectiveness during Family Conflict:

Process and Outcome

This second study builds on the knowledge acquired from the first study by investigating each family member's effective use of power resources. This was accomplished by two methods of assessing effectiveness: (a) by actor power move and subsequent target response (i.e., microscopically); and (b) by power use and its association with winning a conflict (i.e., macroscopically). These means were implemented to compare power effectiveness by actor (i.e., parents versus older versus younger sibling), family role (i.e., parents versus children), and sibling birth order.

Overall, by actor, parents were more effective in their use of power than older and younger siblings using both methods of assessment. This finding supports the hierarchical model of parent-child relationships as parents' execution of power may be justified due to their social and generational position (Punch, 2005). Taking type of power into account, questioning and coercive power were most effective in the short term (i.e., microscopically), whereas simple and elaborated information power were effective in the longer-term (i.e., macroscopically). One explanation is that questioning and coercion may have been harder to ignore in the process of conflict, but a demand (i.e., simple information) or explanation (i.e., elaborated information) may allow for actors to share meanings and develop social understanding, thus affecting the outcome of the conflict (Grusec & Goodnow, 1994; Raven, 1993).

Further, by observing actor moves, simple information was more effective for parents than younger siblings; yet when comparing family role, parents were more effective than children combined. This may be because older siblings were slightly (but

not significantly) more effective in using simple demands and refutes than younger siblings, pulling the weight of the combined proportion of effectiveness in comparison to parents. As for elaborated information, parents were more effective than older siblings, suggesting that children comply with parents' reasoning more than parents and younger siblings comply with older siblings' reasoning. In terms of legitimate power, parents were more effective in the process of conflict than children individually and combined, while parents and older siblings were more effective in their use of legitimacy when assessed by outcome. These findings may reflect the varied methods of using legitimate power in that parents have access to legitimate authority, while children can access moral or preferential rights and in this case older siblings appear to do so more than younger siblings. During the process of conflict, parents' use of reward elicited immediate compliance from children, yet when the outcome of the conflict was taken into account, children, specifically younger siblings, were more effective when using reward power. Here, parents may have used more sophisticated reward methods by providing an instance of positive reinforcement, while younger siblings may have used less sophisticated reward power by providing negative reinforcement (Kuczynski, 2003; Rinaldi & Howe, 2003). Further, use of questions by parents and older siblings were immediately effective during the process of conflict compared to younger siblings' use, yet parents were more effective in winning a conflict with this type of power. This perhaps indicates that although parents and older siblings are effective in using questions during conflict, the types of questions utilized by parents may have consisted of metacognitive questioning techniques that heightened awareness in the target towards the

long-term effectiveness (Thompson & Williams, 2009). Clearly, this speculation requires further study.

Lastly, by comparing sibling birth order, older siblings were more likely to win conflicts in the long-term using elaborated information power and succeeded in both the short and longer-term by using legitimate power. In contrast, younger siblings were more effective in the process and outcome of conflict using reward power. These results reflect the complementary aspect of the sibling relationships as older siblings may have learned more sophisticated methods of influence (i.e., elaborate information and legitimate power), while younger siblings are still developing cognitive abilities and using less sophisticated methods of influence (i.e., negative reward such as whining; Kuczynski, 2003; Rinaldi & Howe, 2003). Furthermore, although children do not differ in their execution of power behaviours in the family, as revealed in Study 1, they do differ in their effective use of different types of power. In brief, these findings indicate that each child has developed their own relational schema for the effective use of certain types of power to get what they want in a conflict (Chang & Thompson, 2010; Grieshaber, 2004; Lollis & Kuczynski, 1997).

Study 3: Contextual Elements of Family Conflict: Power, Topic, and Social Domain

Stemming from the first two studies, the objective of this study was to identify key elements of the conflict context related to polyadic family conflict. The factors under investigation included conflict roles, power resources, topics, and social domain.

Findings indicated that older children were more likely to start a conflict as either the initiator or the combatant, while the younger sibling was equally likely to enter a conflict in three different roles (i.e., initiator, combatant, or additional party). These contrasting

findings may signify that older siblings have superior control in relation to the younger sibling analogous to the nature of their relationship (Dunn, 1993; Howe et al., 2011) and that younger siblings may have developed a sense of agency, in that they attempt to control their environment by entering conflicts in a variety of ways. In addition, parents entered conflicts most often as a third party, which supports the idea of the hierarchical role and superior ability based on their status in relation to their children.

In terms of social domain argumentation by each actor, parents referred more often to the conventional and moral domains than the personal domain, while children referred to the personal and the moral domains more often than the conventional domain. These findings are in line with the conceptualization of parents' role as socializers and children's development of autonomy during the early childhood years, as well as children's growing knowledge of their social world (e.g., individuality, equality, and fairness; Carpendale & Lewis, 2006; Parke & Buriel, 2006). Taking topic into account, when the conflict revolved around controlling actions and rule violations, parents argued from a conventional angle. As for conflicts about ownership, parents, older and younger siblings used the moral domain in support of their arguments. When arguing about conflicting information and obnoxious behaviour, older siblings were more likely to argue for the personal domain. To our knowledge, this is the first study to examine social domain argumentation in regard to different conflict topics during early childhood and, in turn these results can aid in our understanding of how children begin to organize their social knowledge in the context of close and intimate relationships.

The development of social knowledge can occur through the study of power in that children develop differentiated social judgments and reasoning skills for different

social issues (Grusec & Davidov, 2010). Our findings indicate that parents used legitimacy more during their conventional domain arguments and elaborated information more often for moral argumentation. These types of parental power behaviours regarding disputes about conventional and moral issues are consistent with authoritative parenting styles, using firm authority and reasoning when applicable, which fosters children's optimal social and cognitive development (Parke & Buriel, 2006). When arguing for moral issues, older siblings use legitimate power, while younger siblings use elaborated information power to argue their case. These findings may be explained by each child's thought process regarding the strategies used in domain-specific argumentation. In this case, it appears as though older siblings argue about moral issues in a legitimate sense, whereas younger siblings may not see a moral issue as a right, but feel the need to explain their actions or the situation. Further, younger siblings used reward power in arguments about personal issues, which may allude to their abilities in dealing with conflict about, what they see as, a personal issue, thus using immature methods of communication (Buhrmester & Furman, 1990; Chang & Thompson, 2010). These findings demonstrate how each actor not only enters conflict in a different fashion, but also how they conceive of a conflict differently based on social domain references. Furthermore, the topic of the conflict as well as the power strategies utilized throughout the conflict can differ based on the social domain argumentation taken on by each family member.

General Conclusion

The three coordinated studies provide novel and complex findings on power, power effectiveness, and contextual factors during informal polyadic family conflicts. While the studies provide an initial but comprehensive view of issues related to power

and polyadic conflict in the family system, some general limitations should be reiterated. Firstly, the small sample size utilized in this research may have affected the statistical power of the results. Also, lack of generalizability of the findings may be an issue as most families represented a middle class, Caucasian, and Canadian population. The analyses conducted for Study 2 based on power effectiveness macroscopically varied in number of families included. This occurred because not all conflict sequences ended in a win-lose outcome and even if they did, some families may not have utilized certain types of power towards a win-lose outcome and, thus such sequences were not included in the analyses.

In regard to the data, although there were a total of 210 family conflict sequences identified in 35 families, the range of sequences per family was between 1-22 sequences. This means that although the unit of analysis was the family, some families were represented by one conflict while others were proportionalized based on more than one conflict. Further, some sequences included a third child, a baby, ranging from 2-25 months ($M = 16$ months), who may have taken part in the conflict as an additional party, but this only occurred in one percent of the total actor moves; thus, the baby's behaviours were excluded from analyses. In terms of coding details, social domain coding methods for Study 3 in particular required a different approach to coding than other research in the area (e.g., Smetana, 2006). Specifically, we coded the social domain of each actor, based on the content of their arguments, rather than asking actors directly about their perceptions of each social domain.

Regardless of these limitations, these three studies shed light on the field of children's social development, particularly regarding their learning in informal contexts during conflict involving three or more parties. The first study sets the stage for gaining

insight into use of power overall and by individual and relationship contexts during polyadic family conflict. These findings lend support to theoretical ideas about the complexity of the family system (Minuchin, 1988, 2002) and the importance of studying context when assessing aspects of social interaction (Hartup & Laursen, 1999; Sameroff, 1994). In addition, we reveal the relational schemas that may have been created by past interactions and extended experiences between family members (Piaget, 1971; Vygotsky, 1978). The second study confirmed that there is great variability in individuals' ability to be effective in their use of each type of power during family conflict (Baron & Markham, 2000). We provide novel evidence that assessing power effectiveness can be conceptualized and analyzed by two means, microscopically (by process) and macroscopically (by win-lose outcome). This dual approach offers a basis from which to understand how children use their own agency and interpret what they have learned about maneuvering through their social worlds. In the final study, we provided support for not only taking into account individual and relationship contexts when studying power behaviours, but other contexts (i.e., conflict roles, topic, social domain) that can change the process of conflict. These three coordinated studies together build a comprehensive foundation for understanding family dynamics. Certainly, future research can continue to build upon the study of children's agency as exercised through power behaviours, which is fundamental considering the importance of children's social development in the family.

Future studies can add to the present research program by conducting longitudinal and cross-sectional studies, and finer-grained coding. Longitudinally, the changes in power behaviours in family interactions over time can afford a greater understanding of the resources children have available to guide their actions during conflict. In addition,

power effectiveness can be assessed over time to identify whether successful behaviours re-occur or if children acquire greater use of more sophisticated strategies (e.g., elaborated information) over time, especially if their parents use such tactics frequently. In terms of cross-sectional designs, it would be beneficial to understand the differences in power execution in a normative and clinical sample of families, perhaps at different points in the development of children. Finally, considering that the sub-categories were collapsed in the present studies to create broader categories of power behaviours (e.g., the subcategories of physical and verbal coercion into overall coercion), further investigations can pinpoint even more specific behaviours of influence and study how these acts are related to other conflict context factors (e.g., topic, target responses, conflict resolution). Similarly, each social domain can be broken down (e.g., moral issues of physical harm versus fairness) to gain knowledge of the more detailed aspects of social knowledge held by each family member. This can allow for a deeper understanding of children's knowledge development and can be studied along with the types of power utilized during conflict.

In conclusion, the present research studies provide a more detailed and richer understanding of the use of power in polyadic family conflict interactions, and afford both a more intricate and broader perspective on family interactions. In particular, findings from this research program can be utilized in tandem with other research areas on parenting (e.g., parenting strategies and styles), and children's development (e.g., social understanding, social competence, peer relationships, and bullying) in order to make empirical connections towards creating and supporting positive developmental outcomes. Furthermore, future research undertakings in this area can build bridges to

create a better understanding of children's informal learning environments, learning trajectories, and can inform parents, educators and clinical practitioners about critical issues related to power as a vehicle to children's agency.

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Appendix A: Power Coding Scheme

Based on Della Porta and Howe (2012); French and Raven (1959); Punch (2005); Raven (1965).

Definition of Power

The resources person A utilizes so that s/he 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 a multidimensional construct, the following coding scheme differentiates between power bases and power effectiveness.

Abbreviations

O: Older Sibling; Y: Younger Sibling; B: Baby (youngest sibling); M: Mother; F: Father

Coding rules

- Not all lines in the transcripts represent a type of power. Only those lines that fit the descriptions and conditions outlined by the coding scheme can be identified as a power type. Responses to a question are not coded as power behaviour (e.g., M: “Is this your first turn?” O: “Yes”)
- Repeated moves should not be re-coded
- More than one type of power can be identified in one move (e.g., Y: No, you go after me (Simple Information) – in a loud whiny voice (Reward Negative)).
- If one actor is talking to two partners, code as same type of power, separate move and partner, and sync power effectiveness with the appropriate partner’s response.
- Behaviour codes in transcripts can aid in understanding the intended behaviour (see Appendix B: Power Coding Example Chart)

Types of Power

Coercive Power

Refers to the threat of punishment, whereby the recipient anticipates/receives punishment by the agent of influence when s/he fails to conform to the expectations/requests. Involves physical or psychological force in imposing one’s way on others, assuming that the other individual is resisting or opposing. Also defined as a child’s perception that another person has the ability to punish them if they fail to conform to his or her expectation/request, but since exchange is dyadic, each partner can exercise coercive power. As well, it is considered positive punishment involving negative conditions that decrease/weaken the likelihood of an outcome/behaviour.

➤ *Verbal Aggression (or nonverbal)*

- Simple threats (verbal or nonverbal, without if-then consequence) Some examples include: name-calling; sarcasm; yelling; abusive remarks; insults; aggressive demands to instill fear.

- *Note: When a child simply says “No” in response to the other actor, this does not qualify as a verbal protest, unless the child says “No” aggressively (“No” vs. “No!”).
- Nonverbal: Include physical coercive actions that are not directed at another person. For example, plugging ears so as to not listen to partner, banging fist against the table as indication of anger or frustration, kicking a ball out of anger (not towards another person).
- **Physical Aggression**
 - Any form of physical action directed to another person in a coercive fashion.
 - Hitting, grabbing, slapping, punching, throwing or pushing toys at partner, pushing partner or partner’s hand away, tugging or pulling on a toy, destroying or messing up something the partner has been playing with.
 - *Note: handling objects within the context of a conflict does not necessarily denote the use of CP. There has to be a clear indication of force or threat of force directed at another person.

Reward Power

Refers to an individual’s ability to influence others’ behaviours by using material or time and space rewards.

- **Positive reinforcement:** Positive conditions that strengthen a desired outcome/behaviour (will most likely occur during the negotiation process of a conflict). If-then positive rewards for appropriate behaviour.
 - Verbal or non-verbal praise/approval, offer of material goods (bribing), allocation of time and space or positive affect.
- **Negative reinforcement:** negative conditions that strengthen a desired outcome/behaviour.
 - Whining, fussing, begging, complaining, pleading, crying, frown begging, complaining, pleading.
 - *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

An individual’s ability to influence others because s/he is respected, admired, or liked. Based on the identification/dis-identification with the influencing agent or admiration; points out similarities with partner; imitation; or the opposite.

- *Note: The statement “because I hate you” exemplifies referent power because the implied purpose of the comment is to get Person B to feel bad so that Person B in turn, may change their behaviour in a manner that is favourable to Person A

Legitimate Power

Refers to a person’s rights and obligations. The person in power has a legitimate right to influence the behaviour of another.

- **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. Can also involve someone defending the rights of another person.
- **Authority:** Authorities have power to influence or command thought, opinion or behaviour. Parents have authority over their children as they have a higher status and are responsible for their children's well being. A child, however, can place an authority statement to a parent and this would reflect imitation of parental behaviour (e.g., O: "Mom, let him have it")
 - An authority has legitimate influence. An example would be situations in which O asks P to follow through on an earlier promise or to reciprocate an earlier favour. In principle, legitimate authorities do not have to persuade subordinates that the behaviour demanded of them is preferable for them, but merely that it is required. When legitimate authorities issue demands, they have to communicate to their subordinates that these are indeed demands, which system members are obligated to obey, rather than requests or suggestions whose acceptance is left to the members' personal preference (Kelman, 2006)
- **Preferences:** Desire expressed towards objects, but not people; having the right or opportunity to so choose or to assert one's desire when faced with a threat.
 - Examples: Like/dislike, want, need, I don't care- lack of preference
 - *Note: When a child exercises the use of legitimate power in isolation, 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.

Expert Power

An individual's ability to influence another's behaviour because of recognized competence, talents or specialized knowledge. Refers to one's superior knowledge or ability in comparison to that of another. Based upon: (1) Person A's explicit knowledge or expertise in a designated area or (2) Person A indicating implicitly that they have greater expertise.

Information Power (Phinney, 2001; Dunn & Munn, 1987)

Refers to the act of persuasion based on information or logical argument.

- **Simple:** One instance of a demand (without indication of authority), instruction or refusal without explanation. Straightforward rejection, denial or contradiction. Calling upon child to get attention and stop behaviour, reprimand or accusation (e.g., you cheater).
 - Instructing a sibling to do something. Within the bracket of instruction are instances of placing demands (or using bossy language without descriptive reasoning).
- **Elaborated:** Provide reasons, explanations or justification about one's own behaviour or another's behaviour (context specific; O about Y to M: "Mom, he cheated") versus

a direct statement of reprimand or accusation (O to Y: You cheater → Simple Information). This category can include providing an explanation, arguing about ideas/facts, etc.

- Two elaborated info codes can be applied in the same move as long as the two codes can be deciphered with behaviour or text.
 - e.g., “that’s not how you use it” (Social Rule). “If you lay on the floor the wrong way, you won’t be able to use it” (Consequence).
- **Types of Elaborated Justification**
 - **Own action/attributes.** Refer to one’s own actions. Explaining one’s actions and why.
 - **Other’s action/attributes.** Justifies an individual’s action, goal, or prohibition, refers to an action by another person (e.g., tattling on another person).
 - **Own & Other Action.** Justification of own and other’s action. Any explanation that refers to actions by two people (i.e., “us” or “we”).
 - **Own feelings.** Refers to own feelings, needs, or intentions. .
 - **Other’s feelings.** Refers to another’s feelings, needs, or intentions
 - **Social/Household rules.** Refers to a social rule, such as possession or the appropriate use of furniture or game rules.
 - **Consequences of action.** Refers to logical outcome of actions’ material consequences. Clearly indicate action and subsequent consequence (e.g., if-then statements).
 - **Object:** Any explanation that refers to an object’s presence or absence. This can refer to any attribute of an object as justification.

Questioning (Wang, 2006)

Questions are a means for dominant actors to exert power in verbal interaction.

- “Power in discourse is to do with powerful participants controlling or constraining the contributions of non-powerful participants” (Fairclough, 1989)
 - Semantically, a question expresses desire for information, questions expect and anticipate a response and information that imposes the questioner’s will on the addressee – an obvious exercise of control. A question implies that the next conversational turn will be an answer. The discursive position of the questioner and answerer suggests a certain perceived rights and obligations.
- Three classes of questions
 - Yes/No/Clarification: Expects an affirmation or negation (e.g., Is he coming?)
 - Wh: When, where, why: Expects a reply from an open range of possible replies (e.g., when is he coming?)
 - Alternative questions: Expect as the reply one of two or more options presented in the question (e.g., He’s coming, isn’t he? Do you want to use the red cup or the green cup?).

Appendix B: Power Effectiveness by Target Response

Based on Abuhatum and Howe (2013)

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. It concerns who is the more or less powerful person in the conflict sequence.

- Attempts and successes are determined by:
 - If person A uses a power strategy, then the effectiveness of the use of the power strategy will depend upon: (a) Person 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) If the desired outcome was achieved

Dyads within Triads/Quads

This coding reflects contingent activity between dyads in triads, as such if a conflict involves the O, F and M, the use of power and respective attempt or success should reflect dyadic responses. So O can act to F and then M to F and F to O, therefore the success of O's use of power to F would be coded based on F's response to O.

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.
- A success and an attempt cannot be identified on the same move, as it is dependent on the recipient/partner's response.
- 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.

Attempt

When one party tries to effectively employ the use of power as a means to achieve a desired outcome or influence the behaviour of another individual, but is not successful in doing so, this is determined in relation to the partner's behaviour.

- 1) Person A does not successfully change or influence Person B's behaviour, but is met with opposition or resistance.
- 2) Behaviour of influencing agent is an overt attempt
- 3) Reciprocated behaviour is an appeal to a third party
- 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.

Success

When one party effectively employs the use of power as a means to achieve a desired outcome, or as a means to influence the behaviour of the other individual. This is determined in relation to the target's behaviour. Reciprocated behaviour is successfully influenced or changed as indicated verbally or nonverbally.

Appendix C: Power and Effectiveness Coding Example

Premise: Older and younger siblings don't want the baby to go down to the basement with them because she will ruin their card game (*Note: pseudonyms have been applied*).

Line #	Actor	Action	Target	Non/verbal act	Power	Effectiveness
691	O	Verbal Protest	M	Don't let Sammy down here	Simple Information	Attempt
692	O	Show Verbally	M	Look at these cards	Elaborated Information	Success
693	M	Describe	O	I know	-	-
694	O	Threat	M	Don't you dare let her down here Mom	Coercive	Attempt
695	M	Request Action	O	Kate, don't be bold	Legitimate (Authority)	Attempt
696	Y	Justify	M	'Cause she... 'cause she wrecks them	Elaborated Information	Attempt
697	O	Agree Verbally	Y	Yeah	-	-
698	O	Threat	M	If she wrecks one bit, my Daddy's gonna be mad at you.	Coercive & Elaborated Information	Attempt
699	O	Justify	M	'Cause it's your fault	Elaborated Information	Attempt
700	M	Describe	O	Katie (x3)	Simple Information	Success
701	M	Request Action	O	Look at me	Legitimate (Authority)	Success
702	O	Other	M	(Looks at M)	-	-
703	M	Request Action	O	Don't o.k.	Simple Information	Success
704	O	Describe	Y	O.k. Matthew	-	-

Appendix D: Conflict Context Coding Scheme

Based on DeHart (1999), Howe, Rinaldi, Jennings, and Petrakos (2002); Ross, Filyer, Lollis, Perlman, and Martin (1994); Vuchinich, Emery, and Cassidy (1988).

Definition: Conflict is the verbal or behavioural incompatibility in goals that is expressed when one person explicitly opposes another person’s actions or statements (DeHart, 1999; Hay & Ross, 1982, Shantz, 1987, Vuchinich, 1987). It must involve mutual opposition. For example, a parent tells a child not to hit, that would be the initiation. Even though the parent has a legitimate right to reprimand a child, it is considered an opposition to the child's behaviour that is being reprimanded. As long as the conflict is about the same topic, even though the context of conflict changes (e.g., topic is ownership and the issue is based on one child's possession of *different* objects through the conflict), the sequence would remain the same.

Who Initiated: Who is opposing (Mother, Father, Older Sibling, or Younger Sibling) For example, if a parent intervenes in the conflict (“is that nice?”), code the initiator and the child or both children that reject the intervention (“I’m not sure”). The initiator is basically the actor(s) who cause a conflict to start by opposing an action request or protesting etc.

Fighters: What dyad or triad begins the conflict. If there is a triadic initiation of conflict (three initial fighters), it does not have to all start on the same line. For instance, if both O and Y are jumping on the couch and mom yells at older first and on the next line yells at Y, the fighters would be all three participants (MOY).

Who adds: Who gets involved as an additional party. Another party may be involved but not add to the conflict. If there are no third or fourth parties in the conflict, then the sequence *cannot* be coded.

Topic

What type of action/statement is used by the initiator (can be physical or verbal). If the topic changes, that sequence will be coded along with how (e.g., Y & O fight over an object then M intervenes to stop fighting). Can be in reference to prior or post lines. Although topics may change over the course of the conflict, the first topic at the beginning of the conflict should be considered the primary topic to be coded.

Code	Description	Example(s)
CI (Conflicting Information)	Ideas or facts that are true and not based on opinion, How to do something, how something should be completed, used or placed, who they play with	“being 4 is older than being 3 years old”; “no this is a fox”; “O: You’re laughing at me; Y: No, I’m not”; “no, they go in here”
CL (Controlling/ Directives)	Topics involving bossing or giving orders; controlling an individual’s behaviour	M: No more, you can’t read them all; O: Yea; M: No.../You got all those other books, that’s enough.

OB (Obnoxious behaviour)	Provocative behaviour, social intrusiveness, destructive acts, threats, offensive (swearing), aggression	“don’t David” F: Don’t jump up anymore, o.k.; O: Yes, I want to sit on you; F: Somebody is going to get hurt again; M: quietly, no yakking or fighting
OW (Ownership)	Valued resources/personal property/Possessions (objects & space)	M: Santa clause brought it for you and sherry for Christmas; O: Mom, Santa Claus just gives it to one; M: no, he gave this game to each of you
RV (Rule violations)	Violation of social rules or rules in games	F: “You need two balls”; Y: No, we need one ball; F: If you don’t want to play by the rules, then we won’t play

Resolution

Who gets what they want in the end? This is based on the initial argument or goal.

Code	Description	Example(s)
Win-lose	One fighter gives into the other, agrees with opponent, or offers to accept part of the opponent’s position.	Y and O argue with F because they want to play a game and F refuses. F insists they pick their toys up and threatens to send them to bed. O and Y yield and begin picking up their toys
Compromise	Suggesting an alternative or each fighter gives a little to accept a position that falls between the extremes of the conflict	M “ I think you got more of the green than your sister” O “I did”
No resolution	Disengagement/Aversion/Ignoring. One fighter refuses to continue to talk, leaves room)	O: You just don’t want me to have the marbles; F: Watch this; O: (NR) O: They’re not Sherry’s; M: (No Response)

When the conflict ended in a win-lose the winner and loser were identified. There can be two winners and/or two losers depending on the actors involved.

Note: If a sequence ends with no response, it is possible that the outcome is a submission. For example, if the parties are arguing over someone babbling, although the sequence ends without a response but the babbling stops, the resolution is a win-lose because the babbling has stopped. As such, the outcome is context specific in that it does not only depend on what occurs at the end of the conflict, but involves the initial combatants and how the conflict was started.

Appendix E: Social Domain Coding Scheme

Social domain theory states that children create varied forms of social knowledge and perceptions of dyadic interactions (Smetana, 1999). They learn about these through experience with parents, teachers, peers and siblings. Children construct different social knowledge systems and parents portray these knowledge systems in their communications with children. As such, this coding scheme was prepared to assess each actor's argument revolving around differing social domains during family conflict.

Coding Rules

- For every family conflict sequence, one social domain per actor was coded. For instance, if the conflict includes three parties, mother, father, and older sibling, each actor was coded as using one social domain as their primary source of argumentation.
- If the actor imitates, word for word, another actor it should reflect the same social domain. For example, when the father says "Go get a fork" to the older sibling and the younger sibling mimics the same statement "Go get a fork now", they are both coded as the same social domain, in this case conventional.
- If social domain appears to shift throughout the conflict, try to assess what the actor's overall argument is (what is s/he mainly arguing about).
- If two social domains seem evident, choose the social domain that is referenced most often in that particular sequence

Abbreviations

- O: Older Sibling; Y: Younger Sibling; M: Mother; F: Father

Social Domains

Moral

Perceptive understanding of how individuals should be treated or behave towards others.

- **Description:** Involves concern for others' welfare, trust, justice, rights, fairness and/or property
- **Topics:** Lying, sharing, hitting, cheating, tattling, treatment of sibling, lying to parents
- **Examples:** O is concerned that Y is destroying fathers property; "Christopher, you play with your own toys and your brother will play with his"; OS tattles that B is taking his/her toys; M: "Say you're sorry"; F: "Be nice to your sister"; O to Y: are you done with my playdough? It's gonna dry out if you don't put it back in its container – O puts playdough in container; M: "Katie don't be nasty to your sister"; M: "Let Y do what she wants"; M: "You didn't get that for Christmas, Santa brought it for both of you to play with"; Y: "It's mommy's chair too", M: "I bought it, it belongs to me"; O: "I didn't do it, she did"; Y: "That's mine"; Y: "This is not my chair, it's our chair"; O: "Timmy (Y) is painting the table black" (tattling); M: "He doesn't have to play if he doesn't want to".

Conventional

Regards appropriate behaviour deemed by society or culture.

- **Description:** Appeals to authority, social norms and rules, politeness, manners, responsibility or being responsible for your own actions
- **Topics:** Eating food with fingers, talking out of turn, disrespecting parents or siblings, following rules to a game, cursing, chores
- **Examples:** O: “You’re not allowed to do that”; F: “No elbows on the table”; M: “Stop laughing at the dinner table”; M: “Don’t give daddy ultimatums”; M: “If you eat your dinner, you can have some Coke”; M: Come over and help us (M & F) clean this mess”; F: “Use a fork, you’re not an ape”; M: “Don’t laugh, you’re encouraging your sister”; M: “Don’t be bossy”; O: “Kathy (Y), don’t play around because this is real serious we’re starting a game and I go first”. Y wants chocolate chips, Mom says “It’s too late now I already used them, next time ask me earlier and I’ll be sure you have some”. M: “You can’t play with the markers because you don’t know how to use them properly” (children were getting marker all over their clothes). M: “No it’s not the time, we have to clean up” (children are arguing over ownership of scissors). F: “You’re not allowed in the bedroom” (to Y).

Personal

Entails personal autonomy, personal preferences and distinctiveness from others.

- **Description:** Including personal choice, such as controlling one’s actions, giving orders or preferences
- **Topics:** Choosing one’s clothing, friends, privacy, plans for play, directives for personal preference
- **Examples:** F refuses horseback-ride because he’s tired; Y requests/wants a horseback ride; Preference to temperature of hot chocolate; continuing to laugh after parents reprimand at dinner table; O wants father to play cards on his team; Y: “I don’t want to help”; O: “I can do it himself”; O: “I don’t want more dishes to do”; Y: “I don’t need training wheels”; O: “I don’t want to clean up”; O and Y are arguing over space or objects-each child wants to have control by saying “I want it” (unless they indicate moral terms such as not fair, it was mine first); M wants O to finish his painting and to include Y in the painting because it would be nice and because he belongs there too; M wants O to stop touching the ceiling light with her fishing pole and says “don’t touch the lightbulbs, ok kids?”

Prudential

Regulates actions that have physical consequences to self and others.

- **Description:** Harm to self, safety, comfort or health
- **Topics:** Eating vegetables, bedtime, using objects in a dangerous way
- **Examples:** F: “You need your training wheels, remember last time you fell down”; O describes to M that she won’t allow her to cut her own science project, Y tells M she is going to the kitchen to get scissors, M refuses but yields when O says they are his little ones and agrees to use them in the kitchen; O squeezes baby, M: “Oh-oh, that was close to her head”; F: “Don’t play so rough”; Y is swinging an umbrella, M: “He can poke you in the head with that”; F: He can’t see where he is going either”.