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Marissa F. Rodgers
West Virginia University

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The Influence of Birth Order on
Verbal Aggressiveness and Argumentativeness

Marissa F. Rodgers

Thesis submitted to the
Eberly College of Arts and Sciences
at West Virginia University
in partial fulfillment of the requirements
for the degree of

Master of Arts
in
Communication Theory and Research

Scott A. Myers, Ph. D., Chair
Theodore A. Avtgis, Ph. D.
Keith D. Weber, Ed. D.

Department of Communication Studies

Morgantown, West Virginia
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ABSTRACT

The Influence of Birth Order on Verbal Aggressiveness and Argumentativeness

Marissa F. Rodgers

This study examined the influence of birth order on verbal aggressiveness and argumentativeness. Participants were 207 (111 men, 94 women; *M* age = 19.80) students. Participants completed the *Verbal Aggressiveness Scale* (Infante & Wigley, 1986) and the *Argumentativeness Scale* (Infante & Rancer, 1982). Results indicated first-born children reported significantly more argumentativeness than did youngest children. Men reported significantly more verbal aggressiveness and argumentativeness than females. A significant difference did not exist between the verbal aggressiveness of first-born children, only-children, and laterborn children. Future research should compare siblings' reports of verbal aggressiveness, argumentativeness, and other salient communication behaviors to assess differing communicative outcomes based on individuals' order of birth.

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Congratulations to the M. A. class of 2003.

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CHAPTER 1

Introduction

As children enter the family by order of birth, the dynamics within the family change dramatically, sometimes causing stress, conflict, and aggression between members of the family (Starr, 1973). Research has shown that communication behaviors, such as verbal aggressiveness and argumentativeness, can be influenced by an individual's parents and siblings (Bayer & Cegala, 1992; Martin & Anderson, 1997; Martin, Anderson, Burant, & Weber, 1997; Teven, Martin, & Neupauer, 1998; Weber & Patterson, 1997). However, little research has been conducted to examine the role birth order plays in these communication behaviors. The following is a review of research conducted on verbal aggressiveness, argumentativeness, and birth order. The purpose of this study is to investigate the role birth order plays in verbal aggressiveness and argumentativeness.

Verbal Aggressiveness

Verbal aggressiveness is defined as the attack of another person's self-concept in an effort to deliver psychological pain such as humiliation, embarrassment, depression, and other negative feelings about self (Infante & Wigley, 1986). It is expressed through the use of attacks on an individual's character, competence, background, and physical appearance as well as the use of threats, ridicule, malediction, insults, swearing, and nonverbal emblems (Infante, 1987). The following review outlines personality characteristics of the trait, explains relational outcomes of using verbal aggressiveness, and highlights research conducted on verbal aggressiveness within various communication contexts.

Verbal aggressiveness is a widely researched component of aggressive behavior (Infante, 1987) that has been consistently shown to result in negative communicative outcomes. Verbal

aggressiveness sometimes escalates into physical violence (Infante & Rancer, 1996). Less verbal aggressiveness and more argument have been observed in constructive families than in destructive families (Infante, Myers, & Buerkel, 1994), supporting the contention that verbal aggressiveness is a destructive behavior. The documented negative outcomes of verbal aggressiveness include decreased relational satisfaction, increased physical violence, damage to organizational life, and decreased communication between parents (Infante & Rancer, 1996). Infante (1995) noted two additional effects of verbal aggressiveness: self-concept damage and aggression escalation. According to Infante (1995), these effects can lead to reduced trust, relationship deterioration, and ultimately relationship termination in interpersonal communication.

Verbal aggression has been studied in a variety of communication contexts, including interpersonal (Avtgis & Rancer, 1997; Avtgis, Rancer, & Amato, 1998; Beatty, Burant, Dobos, & Rudd, 1996; Beatty, Zelle, Dobos, & Rudd, 1994; Booth-Butterfield & Sidelinger, 1997; Copstead, Lanzetta, & Avtgis, 2001; Infante, Hartley, Martin, Higgins, Bruning, & Hur, 1992; Infante, Sabourin, Rudd, & Shannon, 1990; Martin & Anderson, 1996; Martin et al., 1997; Martin, Anderson, & Horvath, 1996; Myers & Johnson, 2002; Sabourin, Infante, & Rudd, 1993; Sutter & Martin, 1998; Teven et al., 1998; Venable & Martin, 1997; Wigley, Pohl, & Watt, 1989), instructional (Myers, 1998, 2001, 2002; Myers & Knox, 1999, 2000; Myers & Rocca, 2000, 2001; Rocca & McCroskey, 1999) and organizational (Infante, Anderson, Martin, Herington, & Kim, 1993; Infante & Gorden, 1985a, 1985b, 1987, 1989, 1991; Kassing & Avtgis, 1999).

Individuals' verbal aggressiveness is placed in one of three categories: high, moderate, and low. Individuals high in verbal aggressiveness are characterized by more frequent use of

competence attacks, teasing, nonverbal emblems, and swearing (Infante, Hartley et al., 1992) than individuals low in verbal aggressiveness. Infante et al. also suggested that people who use verbally aggressive messages perceive the various types of verbally aggressive messages as less hurtful than people who are low in verbal aggressiveness perceive those messages. Highly verbally aggressive individuals are distinguished by using verbal aggression to appear “tough,” being involved in relational discussions that turn into verbal fights by intentionally being mean to the victim of their verbal aggression, and wanting to express contempt for the message receiver (Infante, Riddle, Horvath, & Tumlin, 1992).

Verbal aggressiveness has been studied in relation to a variety of communication and personality behaviors and traits. Martin and Anderson (1996) determined that a person’s socio-communicative orientation (i.e., the levels of assertiveness and responsiveness individuals perceive themselves to have) is linked to one’s own verbal aggression. Individuals who perceived themselves as either aggressive (i.e., individuals who are assertive but not responsive) or noncompetent (i.e., individuals who are neither assertive nor responsive) report being more verbally aggressive than competent (i.e., individuals who are both highly assertive and responsive) or submissive communicators (e.g., individuals who are responsive, but not assertive), indicating that responsiveness is negatively related to verbal aggression. Dimensions of self-esteem are also related to verbal aggressiveness (Rancer, Kosberg, & Silvestri, 1992). Specifically, Rancer et al. found the self-esteem dimensions of defensiveness, self-enhancement, moral self approval, lovability, likeability, self control, and identity integration were negatively related to verbal aggressiveness. Infante, Hartley et al. (1992) found that individuals who initiated verbal aggression were perceived as less credible and were credited with fewer valid arguments by observers. However, the person to whom the verbal aggression was targeted was

viewed as more credible and was credited with more valid arguments by observers when reciprocating the verbal aggressiveness. Verbal aggressiveness is also positively related to an external locus of control, indicating that more verbally aggressive individuals believe the world is controlled by outside forces, such as chance, fate, or luck (Avtgis & Rancer, 1997).

Additionally, individuals who use more self-handicapping behaviors (i.e., making excuses for one's own failure to save face) are also more verbally aggressive (Avtgis, Rancer, & Amato, 1998).

Verbal aggressiveness has been comprehensively studied across traditional communication contexts. The following pages represent a compilation of the results in interpersonal, instructional, and organizational communication research. These studies provide support for the implication that verbal aggression is a trait that is expressed across contexts.

Interpersonal

Perhaps the most comprehensive work on verbal aggression has been conducted within the field of interpersonal communication research. Because verbal aggression is a dominant aggressive communication trait, it is demonstrated in almost all forms of relationships. The following studies focus on a variety of relationships (e.g., spousal, dating, sibling, parent-child) across interpersonal communication contexts.

Verbal aggression has been found to be a key component in both married and dating couples' communication. A study conducted by Sabourin et al. (1993) assessed the role verbal aggression played in violent, distressed but nonviolent, and nondistressed married couples. The results indicated that abusive couples have significant reciprocity in their verbal aggression compared to nonviolent distressed and nondistressed couples. Similarly, it has been determined that more verbal aggression is perceived in a violent marital dispute than in a nonviolent dispute

(Infante et al., 1990) and self-reported verbal aggressiveness is higher in violent marriages than in nonviolent marriages (Infante, Chandler, & Rudd, 1989). In addition, Infante et al. (1990) indicated that character attacks was the only type of verbally aggressive message which appeared in both violent and nonviolent disputes. Rancer, Baukus, and Amato (1986) also found that married participants' use of verbal aggression was negatively related to communication satisfaction and relationship satisfaction.

In dating relationships, verbally aggressive partners are more likely to use verbally aggressive messages when terminating their relationships (Sutter & Martin, 1998). Additionally, verbally aggressive partners used more disengagement strategies in general. During the termination of the relationship, verbally aggressive messages were also perceived reciprocally (Sutter & Martin, 1998). It has also been found that dating partners' use of verbal aggression is negatively related to communication satisfaction (Venable & Martin, 1997).

Verbal aggressiveness by nature is intended to be hurtful and has been found to be particularly so in friendships. Martin, Anderson, and Horvath (1996) assessed the factor of hurt in verbal aggression. Results showed that trait verbal aggressiveness is positively related to justifying the use of verbally aggressive messages. More importantly, however, verbally aggressive messages received from friends were rated significantly more hurtful than verbal aggressive messages received from acquaintances. In general, individuals who are perceived as high in verbal aggression are not liked by others (Myers & Johnson, 2002).

Sibling and parent-child relationships have been examined to study verbal aggression within the family. Martin et al. (1997) found that verbal aggression between siblings was negatively related to relational satisfaction and trust and positively related with teasing, thereby indicating that if an individual is verbally aggressive, he or she is more likely to tease a sibling

and less likely to have a satisfactory relationship with a sibling(s). Research conducted by Teven et al. (1998) supported the negative link between verbal aggressiveness and relational satisfaction. According to Teven et al. (1998), as families grow, parents establish new rules and boundaries which negatively affect communication patterns between parents and siblings. Additionally, adult children's conflict control expectancies are negatively related to verbal aggressiveness (Copstead et al., 2001). This indicates that when adult children perceive conflict with their parents to be beyond their control, they are more verbally aggressive. Booth-Butterfield and Sidelinger (1997) determined that the more verbally aggressive parents reported themselves to be, the less open their children perceived their family communication. Beatty et al. (1996) found that the verbal aggressiveness of fathers was inversely related to their generated plans in social appropriateness and effectiveness, when fathers generated plans in response to a scenario, which depicted an interaction between a father and a resistant son. Additionally, Beatty et al. (1994) concluded that fathers' self-reports of verbal aggressiveness significantly predicted their adult sons' reports of fathers' sarcasm, criticism, and general verbal aggressiveness. Research has also found adult children who report receiving higher amounts of maternal verbal aggression report lower levels of relationship solidarity and perceive their own romantic partners as less emotionally supportive later on in life (Weber & Patterson, 1997).

Instructional

In the instructional arena, verbal aggression has been negatively linked to a variety of instructor communication behaviors. Verbal aggression has been demonstrated to be negatively related to intimacy, homophily, and to perceived task, physical, and social instructor attractiveness (Rocca & McCroskey, 1999). Myers (2001) determined that perceived instructor credibility (i.e., competence, character, caring) is negatively related to perceived instructor verbal

aggressiveness. Myers and Rocca (2000) found that perceived instructor verbal aggressiveness was positively related to the more unfavorably perceived contentious and precise instructor communicator styles of contention and attributes and were positively related to the impression leaving, relaxed, friendly, attentive, and animated communicator style attributes, which are more favorably perceived. In addition, it was discovered that the contentious communicator style was positively correlated with all instructor use of 10 types of aggressive messages (Myers & Rocca, 2000). Myers and Rocca (2001) found that perceived instructor verbal aggressiveness was negatively correlated with perceived classroom climate and perceived student state motivation.

Important to understanding the relationship verbal aggression has with respect to student affect and satisfaction, Myers and Knox (1999) found that perceived instructor use of verbally aggressive messages is negatively correlated with student affect toward the instructor, student affect toward course content, and student affect toward recommended course behaviors. Additionally, male instructors are perceived to use swearing, teasing, and ridicule verbally aggressive messages at a higher rate than female instructors. In a similar study, the negative link between student affect and verbal aggressiveness was supported (Myers & Knox, 2000). Myers (1998) also found that noncompetent and aggressive instructors were rated slightly higher in verbal aggressiveness than competent or submissive instructors.

Organizational

Studies in the organizational context strongly indicate that supervisors' verbal aggressiveness is negatively related to subordinate satisfaction. Infante and Gorden (1985b) found subordinates who perceived their superior to be high in verbal aggressiveness reported lower satisfaction with their superior, felt their employee rights were respected less, and perceived the superior as less effective. Also, when supervisors were perceived as higher in

verbal aggressiveness, supervisors used more compliance-gaining strategies (Infante et al., 1993). Additionally, the subordinates of highly verbally aggressive superiors were less satisfied with their superiors. A study conducted by Infante and Gorden (1989) yielded results that suggest being low in verbal aggressiveness constitutes an affirming communicator style and supported the negative link between verbal aggressiveness and employee satisfaction. Infante and Gorden (1991) later confirmed that subordinates were most dissatisfied with their supervisor when they felt they had been victims of their supervisors' verbal aggressiveness. Subordinate verbal aggressiveness has also been found to be a significant predictor of latent dissent, the desire of employees, that cannot effectively expressive themselves, to voice an opinion (Kassing & Avtgis, 1999).

Argumentativeness

Argumentativeness is defined as the predisposition an individual has to advocate positions on controversial issues and to attempt refutation of positions other people take on such issues (Infante, 1981). The following review outlines personality characteristics of the trait, explains relational outcomes of using argumentativeness, and highlights research on argumentativeness that has been conducted within various communication contexts.

Defined as a constructive personality trait (Infante, 1987), the use of argumentativeness has a variety of positive outcomes. Individuals who are argumentative have been found to be perceived as more credible and as leaders in group-solving discussions, enjoy higher marital satisfaction, and also are perceived more favorable by subordinates (Infante & Rancer, 1996). Additional positive outcomes of argumentation include increased relational satisfaction, possible prevention of physical violence, enhancement of organizational life, enhanced communication between parent and child, and increased ability to persuade (Infante & Rancer, 1996).

Argumentativeness, in addition to verbal aggressiveness, has been studied across traditional communication contexts such as interpersonal (Avtgis & Rancer, 1997; Bayer & Cegala, 1992; Beatty et al., 1994; Copstead et al., 2001; Infante, 1989; Infante et al., 1989; Martin & Anderson, 1997; Rancer et al., 1986; Rancer & Dierks-Stewart, 1985; Venable & Martin, 1997), instructional (Infante, 1982; Myers, 1998, 2002; Myers & Knox, 2000; Myers & Rocca, 2000, 2001), and organizational research (Anderson & Martin, 1999; Infante & Gorden, 1985a, 1985b, 1991; Infante et al., 1993; Kassing & Avtgis, 1999).

Individuals' argumentativeness is expressed in one of three categories: high, moderate, or low. Individuals who are highly argumentative perceive arguing as exciting, intellectually challenging, and as a competitive event (Infante, 1987). Rancer, Baukus, and Infante (1985) found that high argumentatives elicited the greatest number of positive beliefs about arguing and the least number of negative beliefs. In the same study, high argumentatives distinguished themselves by believing arguing to be a learning experience. In a study conducted by Infante (1981), high argumentatives were more inflexible, appeared more interested, seemed more verbose, conveyed perceived expertise, were more dynamic, were more willing to argue, and displayed more argumentative skill than low argumentatives. Conversely, individuals who are low in argumentativeness will try to manipulate situations to avoid arguments and feel relieved when arguments are avoided. Rancer et al. (1985) found that individuals low in argumentativeness elicited the lowest number of positive beliefs about arguing and the highest number of negative beliefs.

Interpersonal

Argumentativeness has been studied in relation to a variety of communication and personality traits. Argumentativeness has been negatively linked to social desirability, which is

the tendency of an individual to act in a socially acceptable and desirable way (Chen, 1994), suggesting that people who act in socially desirable ways may choose to avoid arguments in accordance with societal norms that deem argument as inappropriate. Research has also shown that individuals who are argumentative tend to be resistant to persuasion and also generate greater numbers of counter-arguments (Kazoleas, 1993). Dimensions of self-esteem have also been assessed in relation to argumentativeness (Rancer et al., 1992). The positive self-esteem dimensions of personal power and competence were significantly and positively related to argumentativeness. Additionally, argumentativeness is positively related to an internal locus of control orientation (Avtgis & Rancer, 1997), indicating that argumentative individuals are more likely to believe their actions control their personal outcomes in life. By assessing the relationship between socio-communicative orientation and argumentativeness, Martin and Anderson (1996) discovered that individuals who perceived themselves as competent or aggressive report being more argumentative than those who perceived themselves as noncompetent or submissive communicators.

Argumentativeness has been comprehensively studied across traditional communication contexts. The following studies represent a compilation of the results in interpersonal, instructional, and organizational communication research. Similar to the research conducted on verbal aggressiveness, these studies provide support for the implication that argumentativeness is a trait that is expressed across contexts.

Family Communication

Research suggests argumentativeness may play an important role in the functionality of relationships. A study on argumentativeness in violent and nonviolent marriages indicated that self-reported argumentativeness is lower in violent marriages than in nonviolent marriages

(Infante et al., 1989), suggesting that marriages that are not violent are more argumentative, and therefore partners employ a constructive communication behavior. Additionally, results indicated that in violent marriages one partner significantly reported lower argumentativeness while the other reported high verbal aggressiveness, thus indicating the unfavorable mix of such conflicting personality traits. This finding stands contradictory to the finding that married couples who varied in argumentativeness reported more marital satisfaction than did couples with similar argumentativeness scores (Rancer et al., 1986), suggesting perhaps a traditionalist notion of partner roles.

In the family setting, a study conducted by Martin and Anderson (1997) yielded that sons' and daughters' argumentativeness was related to their mothers' argumentativeness. Additional research has assessed the link between children's communication behaviors and parenting style. However, no significant trait similarities were found between fathers and both their daughters and their sons. Bayer and Cegala (1992) found that children high in argumentativeness and low in verbal aggressiveness were likely to have been parented in an Authoritative style based on autonomy and love. In contrast, children low in argumentativeness and high in verbal aggressiveness were likely to have been parented in an Authoritarian style based on control and hostility. Beatty et al. (1994) found that fathers' self-reported argumentativeness significantly predicted sons' reports of perceived criticism. Additionally, Copstead et al. (2001) determined that adult children who report an internal conflict locus of control are more likely to approach, rather than avoid, an argument with their parents.

Instructional

Instructional research supports the conceptual link between positive instructional outcomes and argumentativeness. An early study conducted by Infante (1982) examined

behaviors and traits related to the argumentative student. Results suggested that high argumentatives, in comparison to low argumentatives, received more high school training in argumentation, reported higher college grade point averages, were born earlier in family birth order, preferred smaller classes, and were more liberal. Contemporary research has shifted from assessing the individual student's argumentativeness to analyzing the instructor's perceived argumentativeness and the outcomes of such behavior in the classroom. In current research, argumentativeness has been linked to positive teacher and learning outcomes. Myers (1998) discovered that competent instructors (i.e., high in both assertiveness and responsiveness) and aggressive instructors (i.e., high in assertiveness and low in responsiveness) were rated higher in argumentativeness than submissive instructors (i.e., low in assertiveness and high in responsiveness). Additionally, a positive relationship between perceived instructor argumentativeness and student state motivation has been found (Myers & Rocca, 2001). Additional research conducted by Myers (2002) supported the positive link between perceived instructor argumentativeness and student state motivation, as well as affective learning, cognitive learning, and satisfaction. Results of a study conducted by Myers and Knox (2000) indicated that perceived instructor argumentativeness is positively related to student affect toward the course, student affect toward the instructor, and student satisfaction. Perceived instructor argumentativeness has also been shown to be positively correlated with the impression leaving, contentious, open, dramatic, dominant, precise, relaxed, attentive, and animated perceived instructor communicator style attributes (Myers & Rocca, 2000).

Organizational

Research in organizational communication suggests that both supervisors and subordinates who are perceived to be more argumentative are looked upon more favorably by

each other. Infante and Gorden (1985a) found that generally, organizational outcomes were more favorable with concern to a more argumentative person. In a similar study, when supervisors were perceived as more argumentative, subordinate satisfaction was higher, subordinates felt as if their employee rights were respected, and subordinates perceived the superior to be more effective (Infante & Gorden, 1985b). Subordinates whose supervisors were satisfied with their job performance were rated by their supervisors as higher in argumentativeness, compared to subordinates with dissatisfied supervisors. Additionally, subordinate satisfaction and commitment were discovered to be lower when supervisors were perceived as low argumentatives with a nonaffirming communication style (i.e., not friendly, not attentive, not relaxed) (Infante & Gorden, 1991). Infante et al. (1993) discovered complementary findings that positively link subordinate satisfaction with perceived supervisor argumentativeness. Satisfaction has been linked to argumentativeness in small groups. Anderson and Martin (1999) found that group members who were argumentative, but not verbally aggressive, were more satisfied with their group's communication. When examining dissent in organizational settings, Kassing and Avtgis (1999) found that being more argumentative contributed to the use of articulated dissent in the workplace, suggesting that articulated dissent is a constructive attempt that involves argument.

Birth Order

Birth order refers to a child's formative situation, or ordinal position, in his family (Adler, 1928). Sociological and psychological research has been conducted in an effort to better account for the differences in sibling personality and behavior since Galton (1874) noticed a high number of first-born scientists (Bragg & Allen, 1970; Freese, Powell, & Steelman, 1999; Jefferson, Herbst, & McCrae, 1998; Michalski & Shackelford, 2002; Olneck & Bills, 1979;

Paulhus, Trapnell, & Chen, 1999; Salmon & Daly, 1998; Steelman & Mercy, 1980; Weinstein & Sackhoff, 1987; Zajonc & Markus, 1975). According to Adams (1972), the two most consistent findings of birth order research are (a) greater educational attainment among first-borns, including college-attendance (including only-children), and (b) first-borns are more affiliative and dependent upon their parents than laterborns. This review chronicles popular theories that have guided birth order research, discusses results of confounding research, and reviews steps researchers have proposed to guide future research.

A critical review by Adams (1972) highlighted six popular theories that dominated birth order research until that time: intrauterine or physiological, only-child uniqueness, dethronement, anxious or relaxed parent, sibling influence, and economic. The *intrauterine theory* suggests that mothers provide a richer uterine environment for earlier-born children than later-born children. Therefore, the young fetus receives more nutrients from a young mother who has experienced fewer pregnancies, resulting in greater health and intelligence among earlier-borns. *Only-child uniqueness* claims that the only-child is quite different from children with siblings. Only-children become directed toward adult ways and concerns, therefore developing high IQs, conversational skills, and other characteristics valued by adults as a result of the monopolization of their parents' time and interest. A contrasting view of only-child uniqueness claims that only-children are more self-centered and ego-motivated than are adult-oriented (Adams, 1972). Only-children, according to this theory, do receive considerable attention from their parents, but are left to their own wits and resources because they spend a lot of time on their own. Therefore, only-children are more likely to perceive their social world as revolving around themselves than a child with siblings would (Adams, 1972).

Dethronement involves oldest children who, accustomed to their parents' complete attention, are eventually dethroned by a younger brother or sister (Adler, 1928). After being dethroned, oldest children fight to restore their place of importance in the eyes of their parents and siblings. In terms of dethronement and monopolization, oldest children have a monopoly on their parents in early childhood, yet are dethroned; middle children never have monopolies on their parents and are also dethroned; youngest children have monopolies on their parents because they are the youngest and can never be dethroned; finally, only-children have a monopoly on their parents and can never be dethroned.

The *anxious or relaxed parent theory* states that parents are overly protective of their first-born child and may tend to indulge that child, which results in the independent nature of first-borns. The *sibling influence theory* asserts that the interactions between siblings are responsible for sibling behavior and personality differences, not solely the interactions between children and their parents. However, Sutton-Smith and Rosenberg (1970) clarified this theory by noting that sibling to sibling influences may be of greater importance with laterborn children, but not as much with first-born or only-children. *Theories of economics* have typically been used to account for birth order differences in achievement, particularly college attendance (Adams, 1972). One version of the theory states that the oldest child reaches college age first and is free from intra-family competition for educational funding. However, Bayer argued that younger children may have the economic advantage from their parents' improving financial status and financial assistance from older siblings (Adams, 1972). Elder (1962) reconciled these approaches by stating that in high socioeconomic status (SES) families, the oldest child has a greater chance for achievement; however in low SES families it is the youngest children who benefit most from their ordinal position. Blau and Duncan (1967) concluded that oldest children have slight

educational advantages in small families and the youngest children have slight educational advantages in larger families.

Since Adam's critical review, three additional theories have emerged to account for differences amongst siblings. Zajonc and Markus' (1975) confluence model, Blake's (1981) resource dilution model, and Sulloway's (1996) niche model of personality development have guided more recent explorations of birth order.

The *confluence model*, developed by Zajonc and Markus (1975), was based on Belmont and Marolla's (1973) research on birth order and intellectual performance of the entire male population of the Netherlands who reached the age of 19 within the six years of their study. The confluence model attempts to explain children's intellectual development by examining the intellectual climate of the home environment in which they are raised, which is influenced by parental IQ, sibling IQ, family size, family spacing, and birth order. According to this model, large families have children with lower intellectual levels than small families, children in earlier birth ranks have higher intellectual development than later-borns, close spacing of children is related to lower levels of intellectual functioning, and last-borns (youngest) and only-children score lower on levels of intellectual development than one would expect (Paulhus & Shaffer, 1981). An additional facet of Zajonc and Markus's argument is that wide age-spacing allows older siblings to relish an "undiluted" atmosphere and creates a more mature environment for younger siblings (Olneck & Bills, 1979). A "teacher" effect, also posited by Zajonc and Markus, permits older siblings to benefit from teaching younger siblings, however this benefit is not received by youngest and only-children (Olneck & Bills, 1979).

A study conducted by Paulhus et al. (1999) tested the confluence model of intellectual achievement and found that first-borns were nominated as most achieving across four data sets.

Paulhus and Shaffer (1981) discovered that the number of older siblings is associated with lower SAT scores for both men and women. Olneck and Bills (1979) found that when brothers were compared to one another, there were no significant birth order effects on cognitive ability, educational attainment, or socioeconomic success. However, family size differences were associated with significant differences in achievement in family size. Steelman and Mercy (1980) examined the confluence model and indicated a negative relationship exists between sibship size (i.e. the total number of siblings) and IQ for the economically advantaged. Additionally, the correlation between sibship size and IQ is nonexistent in the below-poverty condition only. Steelman and Mercy questioned the argument that only-children are disadvantaged by not having the opportunity to teach a younger child is questionable and that close spacing may have harmful consequences for children regardless of birth order.

According to Blake (1981), the effect of sibship size alone molds a child's intellectual development. The *resource dilution model* asserts that the more children in a family, the more the resources are divided, which results in fewer resources for each child, thus creating less intellectually developed children. Blake (1981) defined three categories of family resources that parents provide. The first category entails the types of home, necessities of life, and cultural objects that are provided by parents. The second category entails the specific changes to engage the outside world or to get to do things that are provided by parents. The third category entails the personal attention, intervention, and teaching that are provided by parents. Parents of fewer children can create a more resourceful environment for their children according to this model, which may yield more intellectually developed children. However, families with large numbers of children may find that their resources are not adequate to provide an equally intellectually stimulating environment for each child.

Downey's (1995) research on the number of siblings and educational performance supported the *resource dilution model* in three ways. He found that the availability of parental resources decreases as the number of siblings increases, parental resources explain most or all of the inverse relationship between sibship size and educational outcomes, and children benefit less from certain parental resources (i.e., frequency of talk, parents' educational expectations, money saved for college, educational objects for the home) when they have many versus few siblings. Guo and VanWey (1999) contested the relationship between sibship size and intellectual development. By controlling for effects of family socioeconomic status, family genetic makeup, and intellectual atmosphere, Guo and VanWey found that the negative relationship between sibship size and intellectual development disappeared.

Sulloway's (1996) *niche model of personality development* rests on the principle that first-borns have the first choice of niche and attempt to please their parents in traditional ways (i.e. achievement, responsibility). However, as new children enter the family, the first-born's status is threatened. Therefore, the resulting personality trait is that first-borns are conservative and conscientious. However, later-borns resist the status of first-borns while seeking to fulfill unfilled niches within the family. Thus, later-borns develop personality characteristics, such as empathic interpersonal style, a striving for uniqueness, and egalitarian and antiauthoritarian political views, that differ from firstborns to secure parental attention (Paulhus et al., 1999).

Sulloway's assessment spurred researchers to further investigate the link between personality and birth order, resulting in contradictory findings. Paulhus et al. (1999) discovered that first-borns were considered most conscientious and later-borns were considered most rebellious, liberal, and agreeable, supporting Sulloway's niche model of personality development. Additionally, results from a study conducted by Jefferson et al. (1998) supported

Sulloway's (1996) proposition that later-born children would be higher in the "big-five factor model" facets of openness and agreeableness. Freese et al. (1999) examined 24 measures of social attitudes in attempt to test Sulloway's contention that firstborn adults are more conservative, more supportive of authority, and more "tough minded" than later-borns.

Sulloway's assertion that birth order was a greater predictor of social attitudes than gender, class, or race, was countered by Freese et al.'s findings. Michalski and Shackelford (2002) replicated a study conducted by Sulloway (in press) that concluded that first-born status is positively correlated with surgency (i.e., dominance, boldness, sociability) and conscientiousness, and negatively correlated with agreeableness, emotional stability, and openness after controlling for sex, age, sibship size, and socioeconomic status. Michalski and Shackelford (2002) found that a negative relationship between firstborn status and agreeableness existed, yet contradictory evidence concluded that no relationship existed between firstborn status and surgency, conscientiousness, or emotional stability. Additionally, Zweigehaft and Von Ammon (2000) examined Sulloway's "born to rebel" hypothesis by studying the birth order of college students who participated in civil disobedience as part of a labor dispute. The researchers determined that laterborns were significantly more likely to have been arrested once or more than once than first-born or only-children, thus supporting Sulloway's thesis that laterborns are more likely to challenge the status quo.

Birth order has additionally been analyzed outside of these theories. One such way is through the family constellation. According to Toman (1976), there are eight types of sibling positions: the oldest brother of brothers, the youngest brother of brothers, the oldest brother of sisters, the youngest brother of sisters, the oldest sister of sisters, the youngest sister of sisters, the oldest sister of brothers, and the youngest sister of brothers. Multiple distal sibling positions

are the multiple positions held by the oldest or by the youngest sibling. Multiple nondistal or middle sibling positions compose two types of sibling relationships, including the middle brother of brothers, the middle brother of an older brother and a younger sister, and the middle brother of two sisters. According to Toman (1970), family constellation guides individuals' relationships throughout their lifespan. The kinds of people an individual chooses as a spouse, a friend, or a romantic partner, will be determined by the people with whom the individual has lived the longest and most intimately (i.e., his or her family).

Age and separation of time are also factors in sibling relationships (Toman, 1976). When the youngest sibling is born only one to two years after the oldest, the youngest views the sibling as a rival for attention and affection of their parents. When the difference in age is three to four years, the older of the two siblings feels threatened. If two siblings are four to five years apart, the oldest has learned to respond sex-specifically to parents and to other people by the time the younger sibling is born. Additionally, social expectations for how males and females behave are emphasized. If age difference between siblings is six or more years, they are hardly affected by one another and tend to become quasi-only-children, unless surrounded by other siblings close in age. Small age distances tend to bind siblings closer together than do large age distances. It is important to note that a parent's birth order may influence the sibling roles of their children (Toman, 1976).

Role-theory also argues to play a role in understanding birth order. The role for each sibling is created to meet both the family's and the individual's needs (Hoopes & Harper, 1987). This idea of "roles" also overlaps with Sulloway's (1996) notion of "niches." The individual who assumes that role does not allow anyone else in the family to assume the same role. The role is an extension of the individual's contribution to the family and fulfills his or her needs of

belonging, his or her needs to be unique, and his or her needs to create order in, and understanding of, the family environment. The roles may also change at different stages of the family life cycle. As children are born into the family at different stages, each child has a different experience because of variations in the family's stability and productivity, the number of people in the system whose needs must be met, developmental tasks, and social interaction (Hoopes & Harper, 1987).

Sibling sex also affects the way in which a role is performed (Hoopes & Harper, 1987). Sibling role assignments may be assigned regardless of sex; however the sex of the sibling determines how the child will perform the role. For example, the first child is typically responsible for everyone in the family, however the way in which the first child proceeds in his or her duties is reflected by his or her sex. Older siblings tend to determine the character of a sibling more so than does a younger sibling (Toman, 1976). Younger siblings tend to create considerable problems for the older sibling, but older siblings decide with parents how to interpret the new family situations and will continue to shape it. However, if an individual sibling is the only one of his or her sex, or if through looks, talents, or disposition they are particularly liked by the parents, he or she may exert a greater influence over his older siblings and take a more active role in shaping the family. A study conducted on conformity by Bragg and Allen (1970) indicated that conformity was the highest for later-born females with a same-sex sibling and lowest for later-born males with a same-sex sibling. No difference in the conformity of first-borns occurred as a function of sex of their siblings. Interestingly, a sex difference emerges when discerning the number of younger siblings and SAT scores. For men, increasing numbers of younger siblings are associated with lower SAT scores, but for women,

increasing numbers of younger siblings are associated with higher SAT scores (Paulhus & Shaffer, 1981).

Rationale

The purpose of this study is to examine the relationship between birth order, verbal aggressiveness, and argumentativeness. Individuals' communication behaviors, orientations, achievements, and personality traits may vary in relation to their birth order (Adams, 1972; Sulloway, 1996). No two children, even children of the same family, have the same experiences in childhood (Adler, 1927). However, similarities in communicator style have been shown to exist between identical twins (Horvath, 1998). This is due, in part, to children's different relationships with their parents and with each other. As character traits, temperament, and skills emerge from family transactions, differentiations become apparent that reflect the competition between the siblings (Starr, 1973), which causes children to find their individual niche in their family (Sulloway, 1996).

According to Infante, Trebing, Shepherd, and Seeds (1984), social learning is one of the four causes of verbal aggression. Therefore, the environmental influence of the family, birth order in particular, may be a significant factor in verbal aggression. To fully understand verbal aggression, the study of argumentativeness is also necessary (Infante & Rancer, 1996).

The basis of this rationale is taken from Adler's dethronement theory. This theoretical model of birth order reinforces that first-born children are placed in positions of "warmth" (Adler, 1931) and benefit from the majority of parents' energy and resources (Blake, 1981). Because first-borns suffer from being dethroned by younger siblings (Adler, 1928), oldest siblings constantly fight to retain the position of dominance in the eyes of their parents. In the oldest children's fight to maintain their position in the family and be the "guardians of law and

order” (Adler, 1927, p. 153), the first-born may attempt to maintain order and control of younger siblings through use of effective argument. Often, only-children have many similar characteristics of oldest children because they are both positions afforded sole parental attention (Adler, 1927). Only-children often develop high IQs, conversation skills, and other characteristics valued by adults (Adams, 1972). Because argumentativeness is a positive communication behavior and parents are likely to direct their only-child towards such communication skills, it is likely that only-children are encouraged to debate and be part of “grown-up” discussions. Although influenced by differing impetuses, a high use of argumentativeness in only-children may be quite similar to high use of argument by oldest children. To investigate this idea, the following hypothesis is proposed:

H1: First-borns and only-children will report more argumentativeness than laterborns.

Substantial research has been conducted that has supported that men are typically more argumentative than women (Infante 1982, 1985; Nicotera & Rancer, 1994; Schultz & Anderson, 1984). Therefore, male first-born or only-children should score higher in argumentativeness than female first-born or only-children. To investigate this idea, the following hypothesis is proposed:

H2: Male first-born and male only-children will report more argumentativeness than female first-born and female only-children.

Sulloway’s (1996) niche model of personality holds that laterborn children often develop unique personality characteristics to fulfill a niche quite different from the niche fulfilled by the typically achievement-oriented, responsible first-born. Thus, second born children may show rebellion or not recognize power or authority, which results in the exhibition of aggressiveness (Starr, 1973) and subsequently verbal aggression. Youngest children are typically smaller in size than their older siblings, are not trusted, are not put in a position of confidence, may strive for power, and have a desire to overcome others (Adler, 1928). Because laterborns are more likely

not to be taught how to effectively argue by their parents as much as their oldest sibling, they may use verbal aggression to compete with their often bossy oldest sibling in order to establish their own niche. Because verbal aggression can be socially learned (Infante & Rancer, 1996), laterborns' constant struggle within their families to fulfill an unoccupied niche may contribute to their usage of verbal aggression more so than their use of argument. To investigate this idea, the following hypothesis is proposed:

H3: Laterborns will report more verbal aggressiveness than first-borns or only-children.

Additionally, substantial research has been conducted that has supported that men are more verbally aggressive (Infante, Wall, Leap, & Danielson, 1984; Infante & Wigley, 1986; Nicotera & Rancer, 1994) than women. Therefore, male laterborns will be more verbally aggressive than female laterborns. To investigate this idea, the following hypothesis is proposed:

H4: Male first-borns will report more verbal aggressiveness than female first-born or female only-children.

Birth order has been categorized in varying ways throughout birth order research (Adams, 1972). Sulloway (1996) proposed that differences exist between first-borns, only-children, and laterborns. In contrast, Adler (1927, 1928, 1931) proposed differences between oldest, middle, youngest siblings, and only-children. Based on Blake's (1981) resource dilution model, each child after the first-born has fewer resources afforded to them, supporting Sulloway's division of first-born, only, and laterborn children. However, Adler (1927, 1928, 1931) maintained that differences exist between the treatment of first-born, only, middle, and youngest children. According to Adler (1927, 1928, 1931), first-born, only, and youngest children are all placed in positions of "warmth" because at some time they are the focus of all attention and for only and youngest children, can never be dethroned. Can the differences that exist between the treatment of middle and youngest children differentiate their verbal

aggressiveness and argumentativeness, or does the fact that they both are not rewarded the celebrated attention that first-borns receive encourage them to communicate aggressively in more similar than different ways? To examine this idea, the following research questions are posed:

RQ1: What differences exist in middle and youngest children's verbal aggressiveness?

RQ2: What differences exist in middle and youngest children's argumentativeness?

CHAPTER 2

Method

Participants

An initial sample of 294 participants was reduced to 207 participants (111 male, 94 female), because 87 participants who indicated they had half-siblings or step-siblings were not included in the analyses. The participants of this study were students enrolled in introductory communication courses at a large mideastern university and were awarded extra course credit for their participation in the study. The age of the respondents ranged from 18 to 30 years ($M = 19.80$, $SD = 1.90$). One-hundred ten ($n = 110$) participants were first-year students, 46 participants were sophomores, 26 participants were juniors, 22 participants were seniors, two participants were graduate students, and one respondent did not report his/her academic rank.

Procedures and Instruments

Participants completed the *Verbal Aggressiveness Scale* (Infante & Wigley, 1986) and the *Argumentativeness Scale* (Infante & Rancer, 1982). The participants were asked to list their siblings in order of age, circling themselves (Freese, Powell, & Steelman, 1999; Salmon & Daly, 1998). This procedure allowed the researcher to classify and categorize the birth order of participants. Based on this classification procedure, 16 participants were only-children, 84 participants were first-borns, 40 participants were middle children, and 67 participants were youngest children.

The *Verbal Aggressiveness Scale* is a 20-item unidimensional instrument that measures the respondent's tendency to attack the self-concept of another person (see Appendix A). Responses are solicited using a five-point Likert-type scale ranging from *almost never true* (1) to *almost always true* (5). Previous reliability coefficients ranging from .82 to .91 (Copstead et al.,

2001; Infante, Riddle et al., 1992; Weber & Patterson, 1997) have been reported for the scale. In this study, a coefficient alpha of .83 ($M = 31.84$, $SD = 6.76$) was obtained.

The *Argumentativeness Scale* is a 20-item two-dimensional instrument that measures the respondent's (ARG_{gt}) tendency to approach arguments (ARG_{ap}) and the tendency to avoid arguments (ARG_{av}) (see Appendix B). Responses are solicited using a five-point Likert-type scale ranging from *almost never true* (1) to *almost always true* (5). In this study, a coefficient alpha of .90 ($M = 65.52$, $SD = 11.68$) was obtained for the 20-item measure. Previous reliability coefficients ranging from .86 to .91 for ARG_{ap} and .82 to .86 for ARG_{av} items (Bayer & Cegala, 1992; Infante, 1982; Rancer et al., 1985; Rancer et al., 1992) have been reported for the scale. In this study, a coefficient alpha of .86 ($M = 33.68$, $SD = 6.39$) was obtained for ARG_{ap} and a coefficient alpha of .84 ($M = 31.84$, $SD = 6.76$) was obtained for ARG_{av} .

Data Analysis

Hypothesis one, hypothesis three, research question one, and research question two were explored using a one-way analysis of variance (ANOVA). For both the hypotheses and research questions, birth order (i.e., first-born child, only-child, laterborn child) served as the independent variable and the summed scores of the 20-item verbal aggressiveness and the 20-item argumentativeness scales served alternately as the dependent variables. Hypothesis two and hypothesis four were explored using a two-way ANOVA. For both hypotheses, birth order (i.e., only-child, first-born child, middle child, youngest child) and sex (i.e., male, female) served as the independent variables and the summed scores of the verbal aggressiveness and the argumentativeness scales served alternately as the dependent variables.

CHAPTER 3

Results

To address the first hypothesis and the second research question, an ANOVA was computed. The first hypothesis forwarded that a significant difference would exist between the argumentativeness of first-born, only, and laterborn children. The research question asked whether differences exist in middle and youngest children's levels of argumentativeness. Results indicated there is not a significant difference between individuals based on their birth order and their level of argumentativeness ($F [3, 203] = 1.99, p = .12$).

The second hypothesis forwarded that male first-born and male only-children would report more argumentativeness than female first-born and female only-children. Results of a two-way ANOVA partially support this hypothesis. A main effect existed for sex ($F [1, 205] = 19.03, p = .00, \eta^2 = .166$) and for birth order ($F [3, 202] = 2.66, p = .05$), however no interaction effects existed between birth order and sex ($F [3, 202] = .04, p = .99$). Men ($M = 68.68$) exhibited significantly more argumentativeness than women ($M = 60.27$). Additionally, a significant difference existed between first-born ($M = 67.63, SD = 11.55$) and youngest ($M = 63.32, SD = 11.33$) individuals with first-borns exhibiting significantly more argumentativeness than youngest children.

To address the third hypothesis and the first research question, an ANOVA was computed. The third hypothesis forwarded that a significant difference would exist between the verbal aggressiveness of first-born, only, and laterborn children. The research question asked what differences exist in middle and youngest children's levels of verbal aggressiveness. Results indicated there is not a significant difference between individuals based on their birth order and their level of verbal aggressiveness ($F [3, 201] = 1.87, p = .14$).

The fourth hypothesis forwarded that male first-born and male only-children would report more verbal aggressiveness than female first-born and female only-children. Results of a two-way ANOVA partially support this hypothesis. A main effect existed for sex ($F [1, 204] = 19.15, p = .00, \eta^2 = .126$). A main effect did not exist for birth order ($F (3, 202) = 1.73, p = .16$), nor did an interaction effect exist between birth order and sex ($F (3, 202) = .41, p = .75$). Results indicated men ($M = 54.55, SD = 9.41$) exhibited more verbal aggressiveness than did women ($M = 49.11, SD = 8.67$).

Because argumentativeness is broken into two dimensions (i.e., ARG_{ap} and ARG_{av}), a post hoc analysis was conducted to determine if differences exist based on individuals' birth order and their tendencies to approach (ARG_{ap}) or avoid (ARG_{av}) argument. An ANOVA indicated no differences exist in individuals' tendency to approach (ARG_{ap}), ($F [3, 203] = 1.14, p > .05$), or avoid (ARG_{av}), ($F [3, 203] = 2.08, p > .05$), arguments based on their birth order.

CHAPTER 4

Discussion

The purpose of this study was to examine whether birth order influenced individuals' verbal aggressiveness and argumentativeness. It was discovered that differences do exist between first-born children's and youngest children's levels of argumentativeness. In addition, men consistently reported higher levels of verbal aggressiveness and argumentativeness than did women. However, all of the proposed differences based on birth order were not statistically supported.

The first and third hypotheses, which stated significant differences would exist among the verbal aggressiveness and argumentativeness of first-born, only, and laterborn children, were not supported. This finding may be explained by the prominent limitation of this study, a lack of a sibling comparison group to compare participants' scores. Siblings' verbal aggressiveness and argumentativeness may vary in comparison to their own siblings'. However, in this study, birth order was treated as a general trait. In future birth order research, all siblings' verbal aggressiveness and argumentativeness must be examined in order to gain more accurate results.

The second and fourth hypotheses, which stated male first-born and male only-children would report significantly higher levels of verbal aggressiveness and argumentativeness than would female first-born and female only-children, were partially supported. Results indicated that men reported significantly greater verbal aggressiveness and argumentativeness than did women. Additionally, first-born children reported significantly greater argumentativeness than did youngest children. The finding that men were significantly more verbally aggressive and argumentative than women is consistent with prior research on argumentativeness (Infante 1982, 1985; Nicotera & Rancer, 1994; Schultz & Anderson, 1984). This theoretical explanation may

lie within identity socialization (Wood, 2003), which indicates men are socially taught to be and socially encouraged to be more aggressive than women.

Research has demonstrated various links between sex and aggressive communication. Rancer and Baukus (1987) found that females, more so than males, believe that arguing is a hostile, combative communication act and is a means to assert control and/or dominate an adversary. In a study conducted by Infante, Trebing et al. (1984), men were more likely to prefer verbal aggression to influence a person who was high or moderately argumentative than when the person to be influenced was low in argumentativeness. Women were likely to use verbally aggressive messages with high, moderate, and low argumentative receivers, therefore indicating that more argumentative individuals are more likely to receive verbally aggressive messages from men, but not necessarily women. Infante et al. (1984a) found that men are more likely to use verbal aggression than women when an opponent was adaptable. However, when an opponent was obstinate, men and women used roughly equal amounts of verbally aggressive messages. Infante (1989) found that an adversary's use of verbal aggression provoked male subjects to be more verbally aggressive and provoked female subjects to be more argumentative.

The finding that first-borns were significantly more argumentative than youngest children can be explained based on Adler's theory of dethronement (1927). In an attempt to maintain dominance over younger siblings and to prevail as "guardians of law and order," oldest children may develop effective argumentative skills (Adler, 1927, p. 153). Additionally, older children may utilize argumentativeness to regain the attention of their mother, when fighting with younger siblings for their mother's attention. However, because youngest children are secure as the eternal baby of the family, they may not be forced to develop argumentative skills in order to gain attention or power in the family.

Based on the limited findings of this study, the influence of birth order may be questioned. In fact, the influence of birth order has been refuted by many scholars. Schooler (1972) noted that popular research conducted on birth order at the time was mainly a result of trends toward an increase in the number of families started and a decrease in family size, indicating disproportionate numbers of subjects. Ernst and Angst (1983) are popularly referenced in regard to their dismissal of birth order influences in social science research. According to Ernst and Angst, birth order research falls prey to methodological limitations. They posit that the popular findings in birth order research (e.g., higher IQ and greater socialization of first-borns than laterborns) are actually outcomes of differences in sizes of families, socioeconomic status, religion, ethnicity, and living environment (e.g., rural versus urban). The negative relationship between sibship size and intellectual development no longer exists, when sibship is controlled for by family socioeconomic status, family genetic makeup, and intellectual atmosphere, according to a study conducted by Guo and VanWey (1999).

According to Adams (1972), inconsistency in birth order findings may be a result of oversimplified theoretical bases. For example, birth order theories are based upon early childhood experiences. However, theories should be expanded to include outcomes of individuals over the lifespan. Adams also suggested that researchers conduct whole family studies to neutralize cohort and demographic inconsistencies in order to take into account family history and social history. Additionally, in an effort to control demographic biases such as sibship size, socioeconomic status, and religion, using advanced statistical methods, such as multiple regression, may be used to control for a number of effects simultaneously.

Results of this study may have been influenced by a number of factors. Not examining all siblings' verbal aggressiveness and argumentativeness in relation to each other was the main

limitation of this study. Additionally, the substantial differences between birth order cells created inconsistency. The size of the number of subjects within the cells ranged from 16 to 84. To provide more accurate results, an equal number of subjects from each birth order category should be attained in the future. Because this research dismissed individuals with half-siblings or step-siblings, these findings cannot be generalized to all types of families. Additionally, prominent demographic factors were not controlled for (e.g., socio-economic status and sibship size).

From a communication research perspective, birth order, verbal aggressiveness, and argumentativeness can be further explored in a variety of ways. Future research should examine whole families' verbal aggressiveness and argumentativeness in relation to each other, to investigate effects of birth order on a comprehensive level, as suggested by Adams (1972). It may also be advantageous in the future to examine all four of Infante's (1987) dimensions of aggressive communication: verbal aggression, hostility, argumentativeness, and assertiveness in relation to birth order in order to gain a more ample understanding of individuals' aggressive communication behavior. Martin and Anderson (1997) concluded that children's verbal aggression and argumentativeness are related to their mother's verbal aggression and argumentativeness. Future research should examine the role maternal birth order plays in individuals' verbal aggression and argumentativeness.

Although results only supported the proposed differences between first-born children and youngest children, prior research has indicated the relationship between the environmental influences of family and these traits (Bayer & Cegala, 1982; Infante et al, 1994; Martin & Anderson, 1997; Martin et al., 1997; Teven et al., 1998; Weber & Patterson, 1997). Because of the indelible stamp a family creates on a child's life, future research should continue to

investigate the link between family influence and salient communication behaviors such as verbal aggressiveness and argumentativeness.

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APPENDIX A

Verbal Aggressiveness Scale (Infante & Wigley, 1986)

Please answer the following questions based upon how much you agree or disagree with the statements regarding how you try to *influence other people*. Fill in the blanks using the following scale:

- 1 = Almost never true
- 2 = Rarely true
- 3 = Occasionally true
- 4 = Often true
- 5 = Almost always true

- ___ 1. I am extremely careful to avoid attacking individuals' intelligence when I attack their ideas.
- ___ 2. When individuals are very stubborn, I use insults to soften their stubbornness.
- ___ 3. I try very hard to avoid having other people feel bad about themselves when I try to influence them.
- ___ 4. When people refuse to do a task I know is important, without good reason, I tell them they are unreasonable.
- ___ 5. When others do things I regard as stupid, I try to be extremely gentle with them.
- ___ 6. If individuals I am trying to influence really deserve it, I attack their character.
- ___ 7. When people behave in ways that are in very poor taste, I insult them in order to shock them into proper behavior.
- ___ 8. I try to make people feel good about themselves even when their ideas are stupid.
- ___ 9. When people simply will not budge on a matter of importance I lose my temper and say rather strong things to them.
- ___ 10. When people criticize my shortcomings, I take it in good humor and do not try to get back at them.
- ___ 11. When individuals insult me, I get a lot of pleasure out of really telling them off.
- ___ 12. When I dislike individuals greatly, I try not to show it in what I say or how I say it.
- ___ 13. I like poking fun at people who do things that are very stupid in order to stimulate their intelligence.
- ___ 14. When I attack people's ideas, I try not to damage their self-concepts.
- ___ 15. When I try to influence people, I make a great effort not to offend them.
- ___ 16. When I do things that are mean or cruel, I attack their character in order to help correct their behavior.
- ___ 17. I refuse to participate in arguments when they involve personal attacks.
- ___ 18. When nothing seems to work in trying to influence others, I yell and scream in order to get some movement from them.
- ___ 19. When I am not able to refute others' positions, I try to make them feel defensive in order to weaken their positions.
- ___ 20. When an argument shifts to personal attacks, I try very hard to change the subject.

APPENDIX B

Argumentativeness Scale (Infante & Rancer, 1982)

Now, complete this survey about *arguing controversial issues* using the following scale.

- 1 = Almost never true
- 2 = Rarely true
- 3 = Occasionally true
- 4 = Often true
- 5 = Almost always true

- ___ 1. While in an argument, I worry that the person I am arguing with will form a negative impression of me.
- ___ 2. Arguing over controversial issues improves my intelligence.
- ___ 3. I enjoy avoiding arguments.
- ___ 4. I am energetic and enthusiastic when I argue.
- ___ 5. Once I finish an argument, I promise myself that I will not get into another.
- ___ 6. Arguing with a person creates more problems for me than it solves.
- ___ 7. I have a pleasant, good feeling when I win a point in an argument.
- ___ 8. When I finish arguing with someone I feel nervous and upset.
- ___ 9. I enjoy a good argument over a controversial issue.
- ___ 10. I get an unpleasant feeling when I realize I am about it to get into an argument.
- ___ 11. I enjoy defending my point of view on an issue.
- ___ 12. I am happy when I keep an argument from happening.
- ___ 13. I do not like to miss the opportunity to argue a controversial issue.
- ___ 14. I prefer being with people who rarely disagree with me.
- ___ 15. I consider an argument an exciting intellectual challenge.
- ___ 16. I find myself unable to think of effective points during an argument.
- ___ 17. I feel refreshed and satisfied after an argument on a controversial issue.
- ___ 18. I have the ability to do well in an argument.
- ___ 19. I try to avoid getting into arguments.
- ___ 20. I feel excitement when I expect that a conversation I am in is leading to an argument.