Constructing a Theory of Power-Relevant Dyadic Helping and Aggressing:

A Mixed-Methods Study

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Abstract

Helping and aggressing behaviors are important to study in adolescence because they relate to adaptive and maladaptive developmental outcomes. These behaviors take place within the social context and their impact may be determined by the nature of the dyadic relationship between the agent and the recipient of the behavior. Relative power may be a critical aspect of dyadic relationships as evidenced by the research on bullying and related outcomes. However, a review of the helping and aggression literatures shows that relative power between agents and recipients of behavior has largely been neglected, perhaps because measurement approaches focus on individual tendencies over time rather than single behaviors at one point in time. I propose a theory that includes relative power as a critical dimension in the conceptualization of aggression and helping in dyadic interactions. I define dyadic interpersonal behavior based on two bipolar continua: impact (extremely beneficial impact [helping] through no impact to extremely harmful impact [aggressing]) and relative power imbalance between dyad members (lower-power through balanced-power to higher-power).

In this dissertation, I tested whether my theory fits with adolescents' conceptualizations of helping and aggressing behavior in dyads using a mixed-methods approach. Focus group data collection occurred from two sessions with 13 and 11 adolescents in order to create gender-relevant and school-relevant vignettes of helping and aggressing behavior. Vignettes varied in intensity of impact (extremely beneficial, moderately beneficial, neutral, moderately harmful and extremely harmful), relative power between agent and recipient (i.e., high to high, low to low,

high to low, and low to high power dyads), and power type (i.e., academic power and social power). The quantitative phase involved the rating of paired vignettes based on similarity by 203 students from the same high school as the focus group participants. Similarity scores were aggregated within gender and the type of power (academic or social). Multidimensional scaling (MDS) was used to test whether the proposed theory of power-relevant helping and aggressing is supported by adolescents' similarity ratings. The models of boys' interpersonal behaviors show three-dimensional solutions whereas those for girls reflect four-dimensional solutions. The first dimension of benefit and harm, which was proposed in my theory, emerged in all four sets of analyses (academic – boys; academic – girls; social – boys; social – girls). The secondary dimension proposed in the theory, relative power, only emerged for girls in regard to social power, as the fourth dimension in that solution.

Qualitative analyses of focus group transcripts suggest that school atmosphere, power in the school, and bullying were primary themes salient in adolescents' thinking about helping and aggressing behavior. Relative power did not emerge as a theme or a concept in these qualitative analyses, suggesting that relative power is not a salient concept in adolescent thinking for helping and aggressing. Thus, neither quantitative nor qualitative analyses support the secondary dimension proposed in my theory.

This mixed-methods study advances theory and research by: 1) demonstrating that adolescents conceptualize helping and aggressing as opposite ends of a single dimension at the behavioral level, 2) demonstrating that power at the individual level with a group referent and collective dyadic power are more salient than relative power in adolescents' perceptions of helping and aggressing behavior, and 3) situating the conceptualization and measurement of interpersonal behavior within the relational context.

Dedication

I dedicate this dissertation to all of the people in our world who help others and to those

who have experienced harm from others, especially those affected by the school shootings at

Virginia Tech and Chardon High School. One day, more people will help and less will harm.

Until then, I hope leaders will inspire others to use their power for good and those who have

experienced victimization will emerge as trauma-informed prosocial leaders.

Acknowledgments

My dissertation would not have been possible without contributions from so many people who gave generously to help me move closer to achieving my ideal self.   I have always appreciated the phrase "It takes a village to raise a child," but a village implies people with a shared culture, similar worldviews and normative expectations for helping. My experience was different – people from *different* "villages" made a personal choice and often sacrifice to help me grow. I am so grateful to these individuals for these countless experiences and meaningful interactions.

I want to acknowledge all of you, from my family to my closest friends and my caring mentors. My privilege and power extend beyond categorical markers of identity to the numerous benefits that accompany the genes passed on from my ancestors and family members along with the socialization practices from those closest to me.

An aspect of my power comes from the gift of a nuclear family with the value system and resources to live a life of service to others. I am thankful to my parents, Kevin and Kathryn McCarty, who continuously demonstrate a balanced-power partnership and shared commitment to public service. I will never be able to express my gratitude to them for shaping my values and inspiring me to also serve.   I am grateful to my sister Kate, whose intelligence surpasses mine in nearly every domain except for psychology, for sharing her endless knowledge to make a difference for others.

Every child and adolescent needs at least one caring adult in his or her life beyond immediate caregivers; luckily for me, I had Elizabeth (Betsy) Shane, my aunt, who was this influential "coach" for me during the toughest of times and over many years. I am especially grateful to Shereen El Mallah, who taught me that large-scale caring must be complemented with

interpersonal helping toward every person who needs it, regardless of the cost. Her selflessness in every action and every friendship is such a testament to her character, which I aspire to one day. Her support helped me find the courage to make one of the most challenging decisions of my life – to switch my Ph.D. program from Industrial-Organizational Psychology to Developmental Science, which led to my dissertation study and made my future career possible.

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I am grateful to my committee members for their endless support of my dissertation and professional aspirations. Thank you to Dr. Roseanne Foti for mentoring me, helping bridge concentration areas within psychology, encouraging me to consider conceptual and measurement challenges (e.g., multi-level and multi-referent constructs), and teaching me about dyadic and power-related concepts (e.g., destructive leadership) that inspired this dissertation. In future work, I aspire to integrate these concepts across development and disciplines as Dr. Kirby Deater-Deckard does better than anyone else in the field of psychology. I am so thankful to Dr. Jungmeen Kim-Spoon who encouraged me to focus on dyads and the broader relational context.

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General Introduction

Prosocial and aggressing behaviors are related to positive and negative outcomes for youth. Agents and recipients of these social interactions may experience benefits or costs, including psychological, physical or material. Victimization from aggressive behavior relates to numerous maladaptive developmental outcomes, such as internalizing concerns of low perceived control and higher appraisal of threats (Hunter et al., 2007), increased rumination and depressive symptoms (Mathieson, Klimes-Dougan & Crick, 2014), as well as internalizing and externalizing behaviors (Hodges, Boivin, Vitaro, & Bukowski, 1995). In contrast, recipients of helping behaviors report higher well-being (Weinstein & Ryan, 2010).

Performing prosocial behaviors has adaptive functions, including reduced mortality risk, improved physical health, effective coping strategies (Brown & Cialdini, 2015) as well as gains in competence, autonomy, and relatedness, which in turn raises well-being (Nelson, Della Porta, Bao, Lee, Choi & Lyubomirsky, 2015). Performing aggressive and bullying behaviors has been viewed as adaptive (Hawley, 1999; Volk et al., 2012), maladaptive (Card, Stucky, Sawalani & Little, 2008), and as both adaptive and maladaptive for youth development (Banny, Heilbron, Ames & Prinstein, 2011).

In addition to psychological impact, helping and aggressing behaviors affect peer relationships and social acceptance at school. In fact, students who are more prosocial are well-liked by their peers (Padilla-Walker & Carlo, 2014), especially in comparison to aggressive students who are more likely to be peer-rejected, lonely, and have internalizing and externalizing problems (Crick & Bigbee, 1998; Deater-Deckard, 2001; Newcomb, Bukowski & Pattee, 1993). Social acceptance from peers is heightened during adolescence because interaction periods with peers increase relative to time with adults (e.g., Collins & Laursen, 2004; Larson &

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Richards, 1991).   As a result, an understanding of the development of prosocial and aggressive behavior in the context of peer relations is critical.

Social behaviors are especially pertinent to development given changes in prevalence and function. Kokko, Tremblay, Lacourse, Nagin, and Vitaro (2006) examined trajectories of prosocial behavior and physical aggression and found declines for these behaviors from childhood (at age 6 years) to early adolescence (i.e., at age 12 years) for most participants in the sample. Similarly, peer reports of classmates' prosocial behavior decline markedly from 5th to 6th grade and remain relatively stable across subsequent grade levels until a small uptick from 10th to 11th grade (Padilla-Walker & Carlo, 2014). Bullying, a form of aggressive behavior, increases in late childhood and then declines throughout adolescence (Pellegrini & Long, 2002). Likewise, Luxenberg, Limber, and Olweus (2015) reported declines in victimization from bullying from 3rd to 12th grade, but did find the number of students who report bullying others remains relatively stable over time. While the frequency of receiving aggressive behavior may decline across grades, studies have failed to measure the intensity or quality of these behaviors across development. As a result, the complex interaction of individual goals and relational context that may facilitate beneficial and harmful behaviors remains unknown.

Social behavior between two members of a dyad is motivated by communal and/or agentic goals (Horowitz et al., 2006). Communal goals are often achieved with prosocial strategies (Diekman & Clark, 2015) whereas agentic goals align with subtypes of aggressive behavior (Olthof, Goossens, Vermande, Aleva, & van der Meulen, 2011; Sijtsema, Veenstra, Lindenberg & Salmivalli, 2009). However, Hawley (1999, 2003) suggests and demonstrates with empirical evidence that both coercive and prosocial strategies may be used for resource goal

attainment. Given the heightened focus on status attainment during adolescence, exploration of various forms of beneficial and harmful social behavior during adolescence may be fruitful.

The conceptualization of social behavior during adolescence must occur prior to research on the antecedents and consequences. A critical component of this conceptualization is the social context. Two sets of researchers studying beneficial behavior through prosocial action (Clark, Boothby, Clark-Polner, & Reis, 2015; Dovidio, Piliavin, Schroeder, 2005) and those studying harming through bullying (Rodkin, Espelage, & Hanish, 2015) emphasize the importance of the relational context. Specifically, prosocial and aggressive behaviors, respectively, are interpersonal phenomena, and thus require conceptualization with respect to the critical features of dyadic relationships. This could include relationship type, character or history (Clark, Boothby, Clark-Polner, & Reis, 2015). Although relative power has been discussed in the bullying literature, it has not been discussed as a critical relational feature in both helping and aggressing interactions.

The overall purpose of this dissertation is to investigate whether relative power is an important dimension in adolescents' perspective on helping and aggressing behaviors. Because researchers and adolescents may hold different worldviews, beliefs and perceptions about helping, aggressing, and bullying behaviors (Vaillancourt et al., 2008), this research will integrate both emic and etic approaches (Berry, 1969; Morris, Leung, Ames, & Lickel, 1999). Specifically, I employ an emic approach with a focus group methodology to assess these complex social phenomena through the lens of adolescents in their school environment, which then informs a derived etic approach (Rogoff, 2003) to test a theory of power-relevant behaviors using culturally-relevant indices of power.

Aims 1.1 and 1.2 examine salient examples of helping and aggressing behaviors between agents and recipients and explore the salient types of power in a rural Ohio high school; this was accomplished through two focus group sessions with adolescent participants. Aims 2.1 through 2.4 address whether adolescents' conceptualization of helping and aggressing behaviors within dyads is structured by two bipolar dimensions, one involving beneficial/harmful impact and the other involving relative power. This was accomplished by analyzing students' similarity ratings of paired vignettes through multidimensional scaling (MDS). Aims 3.1 and 3.2 explore salient themes related to social power and interpersonal behaviors in their school context by inductively analyzing data from the focus groups using grounded theory. Through these aims, this dissertation alters the conceptualization and measurement of helping and aggressing behaviors in a relational context. To accomplish this, the study uses a sequential mixed-methods design (Johnson & Onwuegbuzie, 2004).

In Chapter 1, I discuss theoretical conceptualizations of power in social interactions. In this chapter, I demonstrate that relative power is a meaningful aspect determining the impact of agents' behavior on recipients within dyads and groups. In Chapter 2, I review the measurement of helping and aggressing in adolescence (including research on a specific form of aggression – bullying). I also describe the empirical literature on the structure of helping and aggressive behaviors, addressing explicit and implicit intersections with power. I argue in this chapter that the field has been limited when measurement is focused on overall frequency of engaging in or receiving helpful or aggressive behaviors, which necessitates interpretation of individual differences rather than dyadic analysis. In Chapter 3, I introduce my theory of dyadic power-relevant helping and aggressing behaviors, which is represented by a two-dimensional model that was tested in this dissertation. In Chapter 4, I provide an overview of my mixed-methods study.

In Chapter 5, I discuss the first phase of this study, the use of focus group methodology with high school students on the topics of social power and helping and aggressing behaviors in order to construct contextually-relevant vignettes. In Chapter 6, I describe the second phase of this study, which involves the use of MDS to analyze students' ratings of these vignette pairs. In Chapter 7, I describe the emergence of themes and concepts from the inductive open coding process, based on student responses during the focus groups. Finally, in Chapter 8, I discuss the findings of the study, its strengths and limitations, implications for the conceptualization and measurement of interpersonal behaviors, and potential impact on existing interventions and practice.

Chapter 1 – Power in Social Interactions

This chapter explores social power among adolescents at school and its impact on prosocial and aggressive behaviors. First, I discuss the theoretical conceptualization of social power, including the multi-level and multi-referent issues associated with the construct. Next I discuss the research on power in relation to interpersonal behaviors, especially bullying and related outcomes.

1.1 - Theoretical Conceptualizations

I define antisocial behavior, prosocial behavior, aggression, helping, and bullying as goal-directed behavioral strategies employed by an agent towards a recipient in a dyadic interaction, wherein the power of the agent and/or recipient may impact the behavior itself or the goals attained. Power in its various forms has been conceptualized by social scientists as values and beliefs, self-perceptions and personal feelings, an implicit motive or conscious goal, behavioral skills, power-relevant behaviors, and as status. Turner (2005) defines power as "exerting one's will through others" (p. 9), which contrasts with the more traditional view of power as "asymmetric control over valued resources" (Anderson & Brion, 2014, p. 69). In a review of interpersonal power, Sturm and Antonakis (2015) define power with three components: (a) discretion, (b) means, and (c) enforcement of one's will. These components form a more comprehensive definition of interpersonal power as the "discretion and the means to asymmetrically enforce one's will over others" (p. 139). Simply put, discretion refers to the increased amount of choice in potential strategies to employ. The means refers to the various strategies, which are a combination of strengths and behavior.

Because strengths may relate to either power-relevant behavior or to status, it is necessary to define strengths. Wood, Linley, Maltby, Kashdan, and Hurling (2011) define strengths as

"characteristics that allow a person to perform well or at their personal best" (p. 15). According to these authors, strengths can be personal, physical and psychological. Based on this definition, a strength refers to anything from a physically-defining characteristic, such as height or weight, to the psychological (i.e., mental abilities and skills), such as perspective-taking and emotion recognition or (inter)personal strengths that reflect being well-liked or popular. Intrapersonal strengths may include physical strength and cognitive strength (i.e., intelligence), which have been represented as power domains when referring to harmful power-relevant behaviors (Felix et al., 2011). Interpersonal strengths are more difficult to conceptualize because the strength is conferred by people, as evidenced by the construct of popularity, which translates to "of the people" (p. 17).

Although the definition provided by Sturm and Antonakis (2015) offers some clarity for a general definition of interpersonal power, there are also subtypes of power, such as formal interpersonal or informal interpersonal, as well as different bases of power. In a student peer context in school, informal interpersonal power relative to the dyad is the focus because formal power, derived from the hierarchical structure with roles and responsibilities, fits an organizational setting rather than the peer ecology. Informal interpersonal power relates to the discretion and means to achieve material (e.g., food, school supplies), social (e.g., friends), or informational resources (e.g., telling someone who has the resources) that are valued within the particular context. Discretion and means may be used to maintain attention and approval from peers, choose which games everybody plays, and even the ability to select, maintain or dissolve friendships. In one case, Tim is considered relatively more powerful than another student if he has a group of friends, who give him discretion as the peer group leader to use his popularity, for example, to exclude a student during lunch in order to demonstrate his dominance.

In evolutionary, developmental, and educational psychology, social power is discussed in relation to social dominance (Pellegrini, 2008), social status (Cillessen, Schwartz, & Mayeux, 2009), and social influence (Sandstrom, 2009). As emphasized by Pellegrini, Roseth, Van Ryzin, and Solberg (2009), social dominance refers to a competition over resources at the dyadic or group level. Specifically, a social dominance relationship refers to contests, which results in one member of the dyad winning while the other loses. In contrast, dominance rank refers to "an individual's status in relation to the larger group" based on social dominance relationships (Pellegrini, 2008, p. 3). Social influence occurs when a person or his/her actions yields changes in another person's belief, attitude, or behavior (Simpson et al., 2015).

Social influence, social dominance, and social status may serve as antecedents or consequences of social power. For example, the three-process theory posits that influence techniques of persuasion, authority, and coercion precede social or interpersonal power, which affects resource control (Turner, 2005). The standard theory suggests, however, a casual pathway that flips the antecedents and consequences (resource control to power to influence). Social dominance within a dyadic relationship can be the antecedent (e.g., desired social dominance, social-dominant goal) or the consequence (e.g., obtaining dominance relative to another person) as a result of successfully employing a strategy.

Across a wide array of research, social power may be viewed as a multi-level construct. Cillessen (2007) discussed social developmental research on peer relations with regard to the individual, dyadic, and group-levels of analysis. Similarly, power has been conceptualized at multiple levels: behavioral (Olweus, 1994), individual (Monks & Smith, 2006), dyadic (Veenstra et al., 2007), triadic (Card, Rodkin, & Garandeau, 2010), group (Espelage, Holt & Henkel, 2015; Salmivalli, 2010), family structure (Bowers, Smith, & Binney, 1992) and systems (Sidanius &

Pratto, 2012). However, power has not been explicitly conceptualized as a multi-level and multi-referent phenomenon (Fulmer & Gelfand, 2012), despite the implicit use of referents when operationalizing social power, social dominance, social status, social influence, and even bullying. Aspects of social power have been well studied, but two questions linger: at what *level* does power reside and to *whom* is it relative?

1.1.1 - Power at the Individual Level

Scholars use status as a dimension of power (Cillessen & Marks, 2011). In fact, Bukowski (2011) states "popularity is a form of status. As a form of status, it is a form of power" (p. 16). In the 1980s, social status among peers was based on peer nominations on the four dimensions of acceptance (liked most), rejection (liked least), social preference (acceptance minus rejection), and social impact (acceptance + rejection). This formed five types of students: popular, controversial, rejected, neglected, and average (Coie, Dodge, & Coppotelli, 1982). Cillessen and Marks (2011) note the split in popularity research from the traditional measure of liking to include a new dimension of "perceived popular" from nominations of "popular." Presently, researchers define popularity as either perceived popular (nominated as popular, but not necessarily well-liked) or sociometrically popular (well-liked, but not necessarily nominated as popular; Cillessen & Rose, 2005). Cillessen, Schwartz, and Mayeux (2011) considered a dimension of power, perceived popularity, to reside at the individual level, but conferred by the group at school. Similarly, subjective social status assesses self-perception of one's standing relative to peers at school and their families relative to the entire U.S. (Goodman et al., 2001).

1.1.2 – Power at the Individual Level with a Dyad Referent

"Power is a property of social relation; it is not an attribute of the actor" (Emerson, 1962, p.32). Simpson et al. (2015) define power as the "ability of one individual in a relationship to

exert influence on another person so that the influence agent obtains the specific outcomes he or she wants in the given situation while being able to resist influence attempts by the target" (p. 393). In social power theory (French & Raven, 1959) and the dyadic power-social influence model (Simpson et al., 2015), the primary goal of using power is to influence a change in attitudes, beliefs, or behavioral response of the recipient. Thus, power is discussed in relation to the influence process. Similarly, Sandstrom (2011) discusses conformity, peer pressure, and social contagion as mechanisms of influence during adolescence with an underlying assumption of power as a prerequisite for influence. These authors do not acknowledge the difference between the *influence process* and *power-related behavior*. During the influence process, multiple interpersonal behaviors may be exhibited from the actor to the recipient. In a different stream of literature, Schyns and Schilling (2013) discuss leadership as an influence process and leader behavior as a specific voluntary action. In line with this thinking, power is conceptualized relative to another person (in this case, within the dyad) as the context for beneficial or harmful behavior.

1.1.3 – Power at the Behavioral Level with a Dyad Referent

No definitions of prosocial behavior to date explicitly include power as part of the definitional criteria. However, two specific forms of prosocial behavior (mentoring and tutoring) implicitly refer to relative power in that the helper has more experience and/or knowledge than the recipient. Peer tutoring has been defined as "more able students helping less able students to learn…" (Topping, 1996, p. 322). Similarly, in the case of bullying, these prosocial actions occur within a relationship as part of a process over time due to their definitional criteria of repetition. Mentoring has been discussed as a multi-level construct with an "activity level" theory (DuBois & Karcher, 2013). This is a different label for the same conceptualization as the

behavioral level presented in the forthcoming theory. Currently, no prosocial or helping terms have explicitly included the component of relative power as part of their behavioral conceptualization.

Since the early conceptualization of the term by pioneer Dan Olweus (1994, 2013), bullying has been characterized as repeated aggression with a *relative power imbalance* between perpetrator (agent) and victim (recipient). These components of the definition have been used widely to guide the measurement of bullying for empirical studies (Crothers & Levinson, 2004).

Olweus (2013) categorizes a power imbalance when "it is difficult for the student being bullied to defend himself or herself" (p. 756). This definition implicitly refers to bullying as a *process*, rather than a behavior. The proactive goal-directed aggressive action is only referred to as "bullying" if the defending *reaction* of the victim is "difficult." If the proactive behavior of the perpetrator and reactive behavior of the victim are separate actions, then the original bullying conceptualization by Dan Olweus has conflated power with the "difficulty" of a response by the victim (Olweus, 1994). As a result, bullying cannot be measured as a single behavior but as a harmful action and then response. Thus, a single behavior (either proactive or reactive), at a single point in time, should be measured with respect to a power differential from the perspective of the agent and recipient.

1.2 – Research on Power and Adolescent Helping and Aggressing

If power increases the likelihood of one achieving his/her goals, then power could be conceptualized as an antecedent of behavior, a moderator of the relationship between goal-directed behavior and goal attainment or the function of the behavior. The conceptualization of power as an antecedent implies that power resides at the individual level within an actor, which

contradicts the view of power as a relational factor affecting both dyadic members at the time of a behavioral interaction.

Measuring power or status (e.g., popularity, bullying) at the individual level may involve: (a) peer nominations to capture power or status directly (e.g., who is popular?; LaFontana & Cillessen, 2002), (b) peer nominations to assess power indirectly through a label (e.g., who is a bully?; Monks & Smith, 2006), or (c) peer ratings on the frequency of bullying to classify a student as a "bully" (Warden & Mackinnon, 2003). In all of these cases, the referents are peers in the school, meaning the operational definition of popularity or bullying is at the individual level but relative to the group.

Popularity is a form of power related to behavioral strategies. Numerous empirical studies have explored measures of popularity in relation to prosocial and antisocial behavior types and subtypes. De Bruyn and Cillessen (2006) identified two distinct types of popular early adolescents from students' responses during focus groups and interviews: perceived-popular and prosocial-popular. Adolescents identified attributes of perceived popularity which included antisocial behavior and "cool to bully" motivations for their harmful behaviors whereas descriptions of being friendly and helping others with homework were associated with prosocial popularity. During childhood, prosocial behavior and popularity are often positively correlated (Aikins & Litwack, 2011), although there are instances of no relation (e.g., Sandstrom & Cillessen, 2006). Interestingly, children are more likely to select friends based on popularity than on prosocial or aggressive behavior; this suggests that power is relevant for relationship formation (Logis, Rodkin, Gest, & Ahn, 2013). Among early adolescents, Berger and Rodkin (2012) found prosocial behavior was positively related to perceived popularity and preference (being well-liked by peers). However, aggression was only positively correlated with popularity

and not with preference. This is consistent with the attenuation of the acceptance and popularity relation from middle childhood to early adolescence, from $r = .52$ to $.15$, respectively (Cillessen & Mayeux, 2004). LaFontana and Cillessen (2002) found adolescents' qualitative responses as the descriptors for the popular students to include power and dominance, suggesting power and dominance are salient for adolescents. Despite the aforementioned research relating prosocial and antisocial behaviors to popularity, it remains unclear whether power is the antecedent, function or moderator of prosocial or antisocial strategies. Prior studies have yet to tease apart ways in which power exists within individuals or resides in a relational context between dyadic members.

1.2.1 - Examining Relative Power through Bullying

The empirical evidence has addressed students' conceptualizations of definitional criteria for bullying. Additionally, strategies to measure bullying have included definitional and behavior-based self-report surveys. These approaches include the assumption that bullying should be measured by frequency rather than severity. Vaillancourt et al. (2008) explored the definition of bullying from the lens of children and adolescents by randomly assigning students into two conditions: the first condition involved a standard bullying definition and under the other condition, students developed their own definition of bullying. This approach captures students' perspectives within their unique peer culture and compares it to a common definition used by researchers. As expected, 92% of 8 – 18 year old students in the study identified negative behaviors as a prominent part of bullying, emphasizing the harm component of the bullying definition. However, the most critical distinction between bullying and aggression (from the perspective of researchers) involves a relative power imbalance. Vaillancourt et al. (2008) found that, when asked to define bullying, less than 10% of 3rd-4th grade students reported

words subsumed in the category of "power imbalance", while 33% of 9th-12th grade students included it. This suggests that some adolescents consider relative power to be important in bullying, while others do not. The inconsistency across and within age groups may be related to students' developing ability to make relative social comparisons (Harter, 2003).

Cuadrodo-Gordillo (2012) explored Spanish adolescents' perceptions of bullying based on their self-reported status as aggressor, victim, or witness. First, students reviewed an aggressive behavior and rated it as bullying or not bullying. If it was rated as bullying, students indicated how much the aggressive behavior was related to bullying based on harm caused, the use of revenge, and the popularity of the perpetrator. Using a factor analytic technique, aggressors and witnesses endorsed aggressive behaviors that ultimately loaded on an "intent to harm" factor and "power imbalance" factor when defining bullying, but victims were more likely to endorse items that loaded on the "intent to harm" factor rather than "power imbalance." Aggressors were more likely to endorse power imbalance, possibly because the need for power and dominance may be a critical motive for the behavior.

Victims' focus on harmful intent rather than power imbalance found in this study raises a few issues. First, many psychologists suggest bullying is defined by the perception of the victim, who must perceive an imbalance of power for the behavior to be labeled as bullying (Olweus, 2013). If aggressors and victims do not endorse the same behaviors as bullying, then measurement based on these two different perspectives will result in different conceptualizations and findings. Secondly, factor analysis is limited by the use of non-contextual items. For example, "A person who does it (bullies) is somebody popular" only captures popularity as a form of power at the individual level and fails to capture the *relative* power imbalance between bully and victim (Olweus, 2013).

Research on bullying definitions emphasizes harm, relative power, and repetition, which are categorical descriptors. Even repetition, which refers to the frequency of behavior, has been used as a categorical descriptor of bullying by using a cut-off score of "2 or more times" per month in order to distinguish aggression from repeated aggression (Solberg & Olweus, 2003). The development of a construct from multiple binary categories may be limiting given that scale sensitivity allows for more variation in responses and may lead to improved measurement.

1.2.2 - Bullying and Related Outcomes

Relative power within the dyad is especially important because of the power imbalance when combined with harmful behavior is predictive of more maladaptive outcomes for the recipient in comparison to aggressing with no power imbalance. This is evident when victims of bullying are compared to victims of aggressing. In a comprehensive study of seven victimization types, from physical assault to property victimization, Turner et al. (2014) assessed the degree of harm by assessing trauma symptom scores for non-victims, victims, and victims who reported a power imbalance, which was operationalized as "an advantage over you/your child because he or she is stronger, more popular, or has a lot of influence over other kids" (p. 5). Across six of seven victimization types (excluding sexual assault), victimization involving a power imbalance was associated with significantly more trauma symptoms in comparison to those who experienced victimization without a power imbalance, as reported by parents for children under 10 years and self-reports from 10-17 year-old students. These results are consistent with prior studies indicating behavior involving a power imbalance has adverse effects on constructs related to mental health and illness. Specifically, victims of bullying during childhood reported higher depressive symptoms, sought more social support, and perceived less internal control over situations compared to peer victims of aggressing (Hunter, Boyle, & Warden, 2007). During

adolescence, 7th and 8th grade victims of bullying reported lower life satisfaction, lower school connectedness, and lower hope in comparison to peer victims of aggressing (Felix et al., 2011).

Aggressing and bullying behaviors differ with regard to repetition and relative power imbalance between dyad members. Thus, more maladaptive developmental outcomes reported by victims of bullying in comparison to aggressing (Hunter et al., 2007) suggests frequency and power imbalance may be the critical causal factors resulting in increased harm for the victim. As such, from the perspective of the victim, power imbalance may be a moderator that increases the harm caused by aggressive behavior. Relative power between two people with no harmful behavior in the interaction is not likely to facilitate maladaptive outcomes for a victim. Therefore, the combination of relative power and harm may result in more severe outcomes and consequently, appropriate measurement is critical.

1.3 – Summary

Power has been explored as a personal characteristic and as a contextual descriptor (e.g., power imbalance) of a dyadic relationship. Various operations and methodologies have been used to assess and explore social power among adolescents, including the use of focus groups, interviews, peer nominations, and self-report measures of behavior. Such exploration has resulted in evidence that a form of power (i.e., popularity) is related to both helpful and harmful behaviors (e.g., helping and aggressing). Additional research on bullying has demonstrated the importance of relative power in relation to aggressing.

For this dissertation, I explore helping and aggressing at the behavioral level with a dyadic referent, emphasizing the relational context of the agent and recipient in the behavioral interaction. The impact of relative power in behavioral interactions between peers will be assessed through a focus group methodology and inductive analysis to assess whether relative

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power is a critical dimension associated with dyadic helping and aggressing behavior. Additionally, MDS will be used to analyze paired responses of scenarios involving power-relevant dyadic interaction to determine whether a relative power dimension emerges from adolescents' similarity ratings.

Chapter 2 – Helping and Aggressing Behaviors in Adolescence

Prosocial and antisocial behaviors encompass a wide array of behaviors that benefit or harm others, respectively. These behavioral constructs include actions directed toward a person, a group or even society. Prosocial actions of helping and providing emotional support are contrary to antisocial actions, such as hitting others, truancy and theft. These two behaviors have been conceptualized as unique dimensions of behavior (Hawley, 2003). Wispé (1972) views these interpersonal behaviors as distinct types that are conceptually opposite, which differs from the view of these behaviors as opposite ends of the same personality trait (Goma-i-Freixant, 1995).

2.1 – Theoretical Conceptualizations

For decades, the conceptualization of antisocial, prosocial, and aggressive behaviors has evolved. In a review of this history, Wispé (1972) discussed *prosocial aggression* and the conceptualization of "positive forms of social behavior." Prosocial aggression refers to behavior that has potential harmful outcomes for the recipient (e.g., child) but aims to shape behavior with the expectations of society. Thus, the behavior is defined as aggressing because the proximal aim involves harm to the recipient, whereas the use of *prosocial* as an adjective refers to the ultimate goal of benefitting society. After a review of the literature, Wispé (1972) defines social behavior as positive or negative:

> *Behavior characterized as positive or prosocial, if generalized to most situations,*
> *would be expected to produce or maintain the physical and psychological well-*
> *being and integrity of the other person(s)… By contrast, the kind of behavior*
> *defined as negative social behavior, if pursued, would circumscribe or destroy the*

freedom, expression, integrity, and physical or psychological well-being of the

other person(s).

This antonym conceptualization of positive or prosocial and negative or antisocial behavior emphasizes these behaviors as opposites based on the consequences for the recipient of the behavior. For prosocial behavior, production or maintenance of physical and psychological well-being occurs for the recipient, in contrast to the destruction of well-being for antisocial behavior. These positive and negative outcomes are broad. As a result, follow-up research explored specific modifiers to develop subtypes of antisocial and prosocial behaviors.

Since the introduction of the terms "prosocial" and "antisocial," two forms of implicit or explicit conceptualization have been used at the level of the behavior or at the level of the person. Helping and aggressing are specific social behaviors, whereas "prosocial popular," prosocial controllers, and coercive controllers reflect person types. In both cases, specific types of behaviors or types of people are identified. When behavior is the unit of analysis, forms or subtypes of behavior are explored (Bergin, Talley, & Hamer, 2003). When the person is the unit of analysis, however, prosocial and coercive behavioral strategies are used to develop a "type" of person (Hawley, 1999). For this review, I focused on prosocial behavior, antisocial behaviors, and subtypes directed to a target in a dyadic interaction. As a result, helping, aggressing, and bullying are the focal behaviors examined.

2.1.1 – Types of Behavior

Aggressing and bullying are different subtypes of antisocial behavior. Both actions share the same definitional component of *harmful intent* towards another person, but bullying is a derived term of aggressing, because it also includes an additional component of a *relative power imbalance* between the perpetrator and victim. Most researchers use assessments with continuity

or repetition as an additional component when defining and measuring bullying (Swearer, Siebecker, Johnsen-Frerichs, & Wang, 2010). For example, students rate the number of times they experienced victimization from bullying during the past 30 days. Volk, Dane, and Marini (2014) recommend excluding repetition as a definitional criterion because relative power is the distinguishing feature of bullying, not repetition. Thus, bullying shares key features with aggression, such as harmful intent, but differs conceptually and operationally because of the added components of repetition and relative power (Hawley, Stump, & Ratliff, 2010). Aggression and bullying are distinguishable from each other as evident in a moderate (but not perfect) correlation (i.e., $r = .5$) between the frequency of aggression and frequency of bullying (Pepler et al., 2008).

Despite the conceptual differences proposed in measurement and function for aggressing and bullying behavior (Volk et al., 2014), prosocial behavior has been discussed as a replacement behavior for both forms of antisocial behavior. For example, Colvin et al. (1998) suggest teaching prosocial behavior to replace bullying. Positive Behavioral Interventions and Supports (PBIS) actualized this philosophy in a systems-wide intervention of teaching, modeling, and rewarding prosocial behavior to replace bullying. In a randomized control trial of PBIS in thirty-seven elementary schools, peer rejection and teacher-reported bullying were reduced (Waasdorp, Bradshaw, & Leaf, 2012). In a pilot project, Ellis, Volk, Gonzalez, and Embry (2015) propose the *Meaningful Roles* intervention as a way to teach bullies prosocial strategies for achieving status in an effort to reduce bullying. This intervention has been developed but has yet to be evaluated.

Prosocial behavior is a broad label for a variety of beneficial actions (Schroeder & Graziano, 2015). In fact, Dovidio, Piliavin, Schroeder, and Penner (2006) wrote, "Within

psychology and across scientific disciplines one of the greatest problems in the systematic study of prosocial behaviors has been the lack of consensus about the meanings of these critical terms [i.e., prosocial behavior, altruism, helping, and cooperation]" (p. 21). Dunfield (2014) proposes a taxonomy for prosocial behaviors, which creates helping, sharing, and comforting subtypes.

Helping is a subtype of prosocial behavior because helping is directed toward another person (i.e., in a dyad) or group rather than the broad notion of "people and society." Although conceptually different terms, researchers have used them interchangeably. Terms referred to as "prosocial" in the research studies reviewed herein but operationally defined as helping will be referred to as helping in this document. In eight same-sex focus group sessions with adolescents from varying levels of economic status, students were asked to provide examples of social interactions and positive social behaviors as well as use a prototype approach to describe attributes of a positive social person. Researchers reviewed audiotapes and transcripts and independently coded students' responses into 26 categories of distinguishable types of prosocial actions, which were later reduced to 24 prosocial types based on discussion between the two researchers. Ten psychologists then reviewed these 24 prosocial types and categorized them by relational, overt, and "not applicable" subtypes (Bergin, Talley, & Hamer, 2003).

Helping and aggressing are specific subtypes of prosocial and antisocial behaviors with similar definitional criteria, including: (a) an intention, (b) to benefit/harm, and (c) a target of one or more persons. Helping behaviors are "behaviors intended to primarily benefit others (Carlo, Hausmann, Christiansen, & Randall, 2003, p. 110). In contrast, aggressing is defined as behavior with the "intent to hurt or harm another (person)" (Ostrov & Godleski, 2010, p. 233). Both helping and aggressing may occur between two or more people, but the forthcoming proposed theory organizes these behaviors with reference to another person with the dyadic

context, which includes an agent (referred to as a "perpetrator" of aggressing or "benefactor" for helping) and a recipient (a "victim" of aggressing or "beneficiary" for helping actions).

2.1.2 – Types of People

Behaviors may be referred to as strategies when they are used to accomplish specific goals. Prosocial strategies, such as cooperation and reciprocity, and coercive strategies, which include threats and aggression, are different strategies or forms of behavior with the function of achieving resource control and potentially facilitating psychological need satisfaction from a self-deterministic perspective (Hawley, 1999; 2014). Using a typological approach, Hawley (2003) classified early adolescents based on their strategies for obtaining resources in a school context. Prosocial controllers use prosocial strategies predominantly, coercive controllers favor coercive strategies, bi-strategic controllers use both prosocial and coercive strategies, and those using neither strategy are non-controllers. Bistrategics have the skills to use both prosocial and coercive strategies to achieve their goals. Existence of the bistrategic type implies a similar function for both prosocial and aggressive behaviors, with differential use in different contexts.

2.2 – Measurement of Helping and Aggressing in Adolescence

Behavioral measurement for prosocial/antisocial behaviors and their subtypes uses the following methods: (a) direct observations, (b) peer nominations of people who are helpers or aggressors, and (c) self-report surveys. I focus on the measurement of these behaviors using self-report measures for the primary reason that the perception of behavior with a relational context, such as relative power, may differ depending on the perceiver (e.g., agent, recipient, or bystander). A neutral observer of behavior or nominator of another student has a different social reality and perception of the behavior than the agent and recipient in the dyad. In the sections

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below, the focus is specifically on measures used with adolescents, the age group of interest in this study.

2.2.1 – Helping Only

One measure focuses on measuring helping behavior only (meaning, it does not also address aggressing behavior). Carlo et al. (2002) developed a "tendencies measure" for subtypes of prosocial behavior. The Prosocial Tendencies Measure (PTM) consists of six sub-scales: public, anonymous, dire, emotional, compliant, and altruistic. As Table 1 shows, this measure focuses on the person-level rather than the behavior-level, as items are rated for how well descriptors describe the participant. Note that relative power is not addressed in this measure.

2.2.2 – Aggressing Only

Several self-report measures for adolescent youth at school address aggressive or bullying behaviors only (without addressing helping behaviors). These measures either index individual differences in tendencies (Webster et al., 2014) or index frequency of occurrence of behaviors with a specific referent to time. As Table 2 shows, relative power is included in one assessment of bullying (Felix et al., 2011). Felix and colleagues (2011) define bullying as repeated aggression within a power imbalance only after measuring aggressive behavior frequency and power imbalance as separate components supported the derived concept of bullying (e.g., Felix et al., 2011; Hunter et al., 2007). In contrast, Solberg and Olweus (2003) took a definition-based self-reporting approach by assessing frequency of occurrences after providing respondents with a definition of bullying.

In both definition and behavior-based approaches, an *additive model* is used to form a higher-level unit at the individual level from the summation of behavior at the behavioral level (e.g., Chan, 1998). Specifically, respondents reflect on their interpersonal experiences and

aggregate from the behavioral level (i.e., each harmful experience) to the individual level, forming a composite of bullying frequency within a specified amount of time, such as a week (Volk, Craig, Boyce & King, 2006) or month (Solberg & Olweus, 2003). While this approach is certainly practical for practitioners using an assessment for school-wide prevalence and for social scientists who aim to correlate behavior with other individual-level causes and effects of behavior, it is not the most precise strategy for capturing the contextual nature of behavior and within-dyadic power asymmetry.

Felix et al. (2011) assess self-reported frequency of victimization across all the potential perpetrators in the group (i.e., bullies at school). Students reported their relative power imbalance on dimensions of popularity, intelligence, and physical strength as less, same, or more in comparison to the "main person who did these things to you" (Felix et al., 2011). Despite the strength of assessing bullying and forms of relative power imbalance, a mismatch of referents has occurred. Specifically, behavioral frequency is in reference to all dyads whereas relative "power" relates to "the main person" within a single dyad.

Finally, note the limitation of solely examining the frequency of behavior rather than including the intensity of aggressive or bullying behaviors as well. Harmful social behavior may be measured similarly to other operations of behavior including latency, duration, intensity, and frequency (Martin & Bateson, 2007). Each operational approach for behavior has benefits and costs. For example, aggressing and bullying may be distinguished by the frequency of occurrence (Felix, Sharkey, Green, Furlong, & Tanigawa, 2011), which is efficient for quickly assessing an individual's harmful experiences. When each aggressive behavior is summed into a composite score at the individual level, the intensity and duration of each behavior is (unintentionally) excluded, even though these are other indicators of harmful experience.

Solberg and Olweus (2003) noted that harm, as measured indirectly by social disintegration, increased fairly consistently for every bullying action received from zero times per week to once per week. Volk, Dane, and Marini (2014) suggest that the use of repetition to define bullying serves as a proxy for the degree of harmfulness, which should be the product of behavioral frequency *and* perceived intensity of a behavior. Because the ontology of behavior is reflected by a single action, the use of frequency for defining a *single* behavior is not warranted. In fact, prior research on aggression, bullying, and cyber bullying has operationalized harm to better understand the impact of a form or type of behavior on the victim (Bauman & Del Rio, 2006; Sticca & Perren, 2012). Chen, Cheng, Wang, and Hsueh (2014) found a weak correlation between the measures of frequency and severity for victimization from bullying. Van Noorden, Bukowski, Haselager, Lansu, and Cillessen (2016) found two antecedents, cognitive and affective empathy, differentially predicted bullying and victimization when measured by frequency versus severity. Thus, differing assumptions and implications may be pertinent when operationalizing helping and aggressive behaviors by frequency or severity because the correlates of aggressing frequency may differ from correlates related to severity.

2.2.3 – Helping and Aggressing

Finally, three measures used with adolescents address both helping and aggressing. In a review of research on the measurement of helping and aggressing among adolescents, two sets of authors (Boxer, Tisak, & Goldstein, 2004; Hawley, 2003) emphasize the similarities of these behaviors based on the similarities in function (see Table 3). Within a social cognitive theory framework, Boxer et al. (2007) emphasizes the similarities between proactive aggression and proactive prosocial as well as reactive aggression and reactive prosocial. Their prosocial behavior questionnaire measures adolescents' proactive and reactive helping and aggressing.

Participants rate the level that "best describes what you are like as a person" (p. 94). This measurement approach captures an individual's tendencies toward behavior and its functions.

Hawley (2003) focuses on the measurement of goal-directed prosocial and aggressive strategies for achieving resource goals among early adolescents (see Table 3). Hawley (2011) states "prosocial and coercive (aggressing) strategies can be measured on independent scales and then used to identify types of individuals based on their employment of the strategies relative to other social group members" (p. 310). The aggregation of behaviors across multiple dyads forms a "type" of person: prosocial controller, coercive controller, bistrategic controller or even non-controller. These behavioral strategies are employed *repetitively* over a *specific period of time*. Thus, in both studies, these independent behavioral dimensions are capturing two modifiers of behavior, rather than a single behavior at a specific point of time.

Belgrave, Nguyen, Johnson, and Hood (2011) use an adapted version of the Children's Social Behavior Scale in order to measure three forms of social behavior: overt aggression, relational aggression, and prosocial behavior. The measure captures behaviors on a 5-point Likert scale from "never" to "all the time."

2.3 – Research on the Structure of Helping and Aggressing

Prior research explored the measurement structure and classification of aggression and helping behaviors from either a dimensional or categorical worldview. The dimensional approach assesses the degree of a target construct(s) by specifying an object's standing on a single continuum or relative to multiple continua. In contrast, the categorical approach refers to discrete or qualitatively different forms of an object or construct, such as forms of behavior (Clark, Watson, & Reynolds, 1995). For example, the continuum of benefit-harm for defining prosocial versus antisocial behavior differs from the distinct categories for defining forms of

behavior, such as physical and verbal aggressing. In the field of psychology, controversy surrounds the process of transforming abstract concepts to variables. Specifically, two concepts can be represented on a bipolar dimension with each construct on opposite ends of the same continuum. Concepts may also be unidimensional, which results in the ability to explore bivariate relations between these distinct constructs. The use of a bipolar dimension for terms has been used for defining emotions (Russell & Carroll, 1999), dispositional constructs (e.g., optimism-pessimism; Kubzansky, Kubzansky, & Maelko, 2004), attitudes (Cacioppo et al., 1997), and behavior (Goma-i-Freixanet, 1995). In the sections below, research addressing the structure of helping and aggressing behaviors is described. Because research using adolescent participants is scant, studies with older age groups have also been included in this section.

Building on the view of prosocial and antisocial behavior as opposites, researchers extended this work to a single antisocial-prosocial bipolar trait (Goma-i-Freixanet, 1995), aggression and altruistic behavior as opposite ends of the same problem-solving continuum (Eron & Huesmann, 1984), and an empirical test of altruism and antisocial behavior as potential opposites (Krueger et al., 2001). Eron and Huesmann (1984) documented the consistent negative correlations between indirect indicators of prosocial behavior and aggressive behavior during a longitudinal study of children from middle childhood to adulthood provides evidence for a prosocial-aggressing trait. However, these results are limited by the use of anxiety and popularity as "prosocial" indicators of aggression and the use of measures capturing tendencies rather than specific prosocial behaviors. Among adult twins, Krueger et al. (2001) explored the correlations of antisocial and altruism sub-scales and personality questionnaires. They found no significant negative correlation between the frequency of altruistic behavior and antisocial, but did report a significant negative correlation between aggression and altruistic behavior ($r = -.21$).

Additionally, different personality factors predicted altruism than those predicting antisocial behavior. As a result, the authors concluded these behavioral tendencies are not opposites due to the non-significant correlation as well as the distinct etiologies of these behaviors based on different personality correlates. In both studies, the correlations between the variables of interest (e.g., aggression and prosocial, antisocial, and altruism) were used to determine the "opposite" or "non-opposite" nature of these behaviors. However, the taxonomic structure of these behaviors was not studied empirically.

In order to determine the taxonomic structure of a single behavior or similar behaviors, the use of multidimensional scaling (MDS) is preferred to more ubiquitous analytical techniques (e.g., factor analysis and regression analyses) where tendencies of behavior are measured. Pearce and Amato (1980) used MDS to capture the underlying dimensions of helping behaviors, including direct to indirect and serious to non-serious bipolar dimensions, based on the similarity paired ratings of 62 helping behaviors by first-year undergraduate students. In a follow-up MDS study, Smithson and Amato (1982) labeled two bipolar dimensions of "make feel good—prevent feeling bad" and "make improve—prevent worsen," which mapped onto the previously identified serious to non-serious dimension.

The structure of antisocial and aggressive behaviors have been proposed and mapped based on various dimensions. Frick et al. (1993) created a two-dimensional model to map antisocial behaviors of youth on a covert to overt dimension and destructive to non-destructive dimension. Parrott and Giancola (2007) developed a taxonomic system for aggressive behavior based on the route of expression (direct or indirect, active or passive) and specific subtypes of aggression. Kelly (1987) proposed a continuum of violence based on the intensity of physical and psychological harm caused. Although violent behavior is a more extreme form of aggressive

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behavior, this continuum may be applicable to aggressing within the dyad. No studies were identified where the taxonomic structure of a single interpersonal behavior uses a bipolar benefit-harm dimension. This would attempt to connect and label helping and aggressing behaviors.

2.4 – Summary

Helping and aggressive behaviors have been measured using dimensional and categorical worldviews. As evidenced by Tables 1, 2, and 3, most researchers categorize helping and aggressing as two distinct forms of interpersonal behavior and then measure the frequency of behavioral enactment or receipt. Some researchers categorize forms (e.g., relational, verbal, and physical aggression) and then measure the frequency of behavior within each form. Such measurement is more reflective of a helpful or aggressive disposition than helping and aggressing. In fact, some researchers (e.g., Hawley, 2003) form a higher-level construct of "person type" (e.g., prosocial controllers, bistrategics) at the individual level based on two lower-level dimensions (i.e., prosocial frequency for goal attainment, aggressive frequency for goal attainment). Notably, relative power of agents and recipients of behavior is assessed in only one measure, and in none of the empirical work on the structure of helping and aggressing behavior. This proposed dissertation study is to the first to empirically examine whether relative power is important in the perception of helpfulness or harmfulness of interpersonal behaviors indexed at the dyadic level.

Chapter 3 – Proposed Theory of Power-Relevant Dyadic Helping and Aggressing

For this chapter, a theory of power-relevant behaviors is proposed based on the prior literature review. First, the ontology of behavior is discussed with reference to the prior conceptualization of prosocial and antisocial behavior. Then a dimensional approach is proposed for measuring harmful and beneficial interpersonal behaviors.

According to Alvarez (2009), a meta-psychology or ontology of behavior can be understood based on Aristotle's four *causes*, which refers to "principles, foundations, the reason for being, or why something is the way it is" (p. 46). These four causes are the formal, efficient, material, and final. The formal cause refers to the proximal cause, whereas efficient refers to distal factors. The material cause refers to the organism, presumably as an agent of the behavior, recipient of the behavior, or even third-party observer of the behavior. The final refers to the beneficial and costly consequences associated with the behavior. Simply put, what something *is,* which in this case refers to what behavior *is*, involves *relations* to the antecedents and consequences, as well as *whomever* is experiencing or interpreting the behavior. Thus, inherent in the process of defining and then operationalizing terms is an explicit or implicit bias towards defining behavior in relation to either the antecedents (i.e., causal mechanisms) or consequences (i.e., function).

The prior review of articles "testing" the notion of antisocial and prosocial "opposites" used correlations between individual tendencies (of behavior) with specific antecedents (e.g., individual difference variables). The prior articles examining the empirical structure of aggression and helping behaviors focused on specific descriptors of behavior, such as the means (e.g., direct-indirect), the functions (e.g., proactive and reactive), and the forms (e.g., physical,

relational). However, these studies did not focus exclusively on dyadic interactions or the

relational context.

Rodkin, Espelage, and Hanish (2015) suggest a relational approach to bullying may help

clarify the conceptual issues regarding constructs by noting the need to "clarify the taxonomic

structures of bullying and better distinguish it from aggression" (p. 316). Similarly, but focused

on prosocial behaviors, Clark, Boothby, Clark-Polner, and Reis (2015) posit the relational

context situates beneficial behavior and shapes its antecedents and consequences based on six

critical variables: 1) relationship type, 2) relational character, 3) individual differences, 4)

relationship history, 5) developmental stage, and 6) relationship networks. Although these

variables were explicitly discussed in relation to prosocial behaviors, Rodkin et al. (2015)

discuss similar concepts that could fit within the six aspects of the relational context: 1) bullying

is fairly normative among adolescents; 2) within a peer social hierarchy, some dyadic

relationships will be balanced (equal power between peers) and others will not be; 3) bullies

differ in their targeting of specific victims versus their general disposition toward all students; 4)

students may have a history of aggressing towards each other as the more or less powerful person

(e.g., bully-victims) within the same dyad; 5) the type and frequency of bullying may change

throughout their shared schooling experiences for how they proactively and reactively act toward

each other; and 6) one's social network (and group membership) influence bullying within a

dyad. Therefore, the relational context is salient and relevant descriptors of interpersonal

behavior and relational factors (e.g., target of the behavior and relative power) may have been

excluded based on the conceptualization of research and measurement of these behaviors.

Clark, Boothby, Clark-Polner, and Reis (2015) posit the relationship type, which includes

specific norms for social interaction, based in social evolutionary psychology, may influence the

function of the goal-directed behavior (i.e., to serve an adaptive purpose for survival). In a review of prosocial behavior from an evolutionary perspective, Brown and Cialdini (2015) emphasize the causal effect of relational closeness on prosocial behavior because of the evolutionary function. In a proposal of Resource Control Theory (Hawley, 1999) and follow-up empirical studies (Hawley, 2003), Hawley classifies adolescents based on the prosocial and coercive (which includes aggressive) for achieving goals. Volk and colleagues discuss the evolutionary advantages of bullying others (2012, 2014). While separate lines of research, each of these authors propose conceptually or demonstrate empirically that prosocial behavior, aggressing, and bullying are used functionally to achieve proximal and ultimate goals. From the perspective of the agent, the proximal goal of causing benefit or harm to the other person facilitates dominance, status and/or power, which ultimately serves an adaptive purpose. Given the similarity in function among behaviors that benefit and harm others, the emphasis was placed on the relational factors (e.g., target and relative power) that may make certain functions more salient.

Prior research on helping and aggressing behaviors was based in a categorical and/or dimensional worldview, whether or not the authors explicitly noted their own perspective in their studies. The use of helping and aggressing as terms for different "types" of behaviors reflects a categorical worldview. In contrast, the theoretical model proposed in this study is based in a dimensional worldview for defining interpersonal behavior with respect to the categorical labels of helping and aggressing. Despite authors articulating the need for two separate dimensions when measuring multiple behaviors (Krueger, Hicks, & McGue, 2001), the use of a bipolar benefit-harm dimension is appropriate given that a single behavior by an agent cannot be both aggressive and helping simultaneously when directed toward a single recipient.

For the conceptualization of interpersonal goal-directed behaviors within a dyad, two bipolar dimensions are used. As shown in Figure 1, the x-axis reflects the *intensity of impact* from extremely beneficial impact to extremely harmful impact, with a midpoint of no impact, and the y-axis reflects the *relative power* between members of the dyad from higher-power to lower-power, with a midpoint of balanced power. The inclusion of a power dimension results in a theoretical model for defining power-relevant behaviors, from balanced power, such as aggressing and helping, to higher-power aggressing (i.e., bullying) and even higher-power helping. These specific subtypes of prosocial and antisocial behavior along with more specific forms of behavior are discussed in depth after reviewing the dimensional model. These dimensions are consistent with a theoretical reconceptualization of bullying as: (a) goal directed, (b) harmful, and (c) occurring within a relative imbalance of power (Volk, Dane & Marini, 2014).

3.1 – Intensity of Impact on a Beneficial to Harmful Continuum

The first bipolar dimension is the intensity of beneficial-harmful impact with extremely beneficial to extremely harmful, with a midpoint of neither beneficial nor harmful (see Figure 2). The rationale for favoring bipolarity is based in part on the "language" claim used by Zautra et al. (1997) for defining emotions. Russell and Carroll (1999) stated, "Bipolarity is a truism" (p. 6) for concepts that have opposite meanings (i.e., antonyms). Additionally, they suggest the conceptual definition of a word, such as an emotion, are based in components or underlying dimensions. Reynolds (2007) argued similarly, suggesting higher-order derived words are based on the intersection of these primitive terms. For example, helping and aggressing are social behaviors based on the same primitive terms or components (excluding the antonym): (a) an intention, (b) benefit/harm, and (c) a target of one or more persons. In the current lexicon,

antonyms can be complementary, which refers to qualitatively different concepts (e.g., absent-present), or graded, which reflects a dimension or continuous spectrum (e.g., high-low) (Cruse, 1986). The intensity of the benefit-harm spectrum may be measured continuously, thus a graded approach may be appropriate to form a bipolar dimension of beneficial-harmful intensity.

3.2 – Relative Imbalance of Power

In addition to the benefit-harm continuum, behaviors also may be defined by a bipolar dimension from higher to lower power with reference to the other person in the dyad. From a categorical perspective, I conceptualize relative power as a component of higher-power aggressing, which is consistent with the definitional criteria for bullying used by Volk and colleagues (2014). However, the use of categories (e.g., higher or lower relative power) is limiting since a dimension of relative power may increase measurement sensitivity and accuracy. Although the term bullying and its correlates has been well documented (Olweus, 2013), lower-power aggressing has not been defined, measured and therefore, studied in relation to possible causes and consequences.

My conceptualization allows for exploration of lower, balanced, and higher-power aggressing and even similar positive interpersonal behaviors, such as tutoring and mentoring, which are operational forms of higher-power helping behavior. To my knowledge, researchers have not classified tutoring and mentoring within the same class of behavior (e.g., higher-power helping) nor have they discussed the functional similarities of behaviors such as these to higher-power aggressing (e.g., similar personal benefits to the agent). As a result, this proposed theory and relative power dimension is novel but also based on prior conceptualizations from researchers and adolescents. Specifically, researchers have included relative power as a component of bullying (Olweus, 1994; Volk, 2014) and focused on the relational (dyadic)

context of the behavior (Rodkin, Espelage, & Hanish, 2015). Students have noted relative power imbalance as definitional criteria for bullying (Cuadrado-Gordillo, 2012; Vaillancourt et al., 2008). Additionally, power has been implicitly considered as a component for specific prosocial forms of behaviors, such as mentoring (DuBois & Karcher, 2013). Beyond conceptual work, it is noteworthy that empirical evidence demonstrates the moderating effect of relative power when exploring the link between victimization and severity of harm for victims (Hunter et al., 2007), such that harm is higher for victims when relative power is noted (versus not noted).

Power imbalances in dyads may arise from individual characteristics and societally constructed categories (Sidanius & Pratto, 2012). Individual characteristics, such as intelligence, physical strength, and popularity are used as indices of relative power in aggressing (Felix et al., 2007). In nearly all cultures, an adult is more socially dominant than an adolescent and a man holds more power than a woman (Sidanius & Pratto, 2012), suggesting age and gender may be cross-cultural indices of power. An international study of adolescents in 37 countries found countries with greater income inequality were more likely to have higher bullying rates (Elgar, Craig, Boyce, Morgan & Vella-Zarb, 2009), suggesting relative social power manifests at the macro level of ecological systems. Similarly, Chaux and Castellanos (2015) found age and socio-economic differences contribute to power imbalances in schools. Across cultures, gender, age, and social status may be important power dimensions, whereas more specific forms of social status may differ by culture.

Chapter 4 – Overview of the Current Study

In Chapter 1, a review of the conceptual issues surrounding aggressing, helping, and power-relevant behaviors suggests an integrative theory of these behaviors was notably lacking. In Chapter 2, measurement concerns were noted, with measures capturing general "tendencies over time" rather than behavior. With one exception, relational factors (e.g., perception of the person, relative power, and target of the behavior) were not included as modifiers of the conceptualization and measurement of behavior. In Chapter 3, I propose a theory of power-relevant behavior to address the conceptual and measurement issues discussed previously. This theory is backed by a robust literature review on power-relevant harming and scant literature on power-relevant helping. The next phase of development for this theory is to do an empirical assessment using a multi-phase, mixed-method design (Johnson & Onwuegbuzie, 2004).

Mixed-methods research uses a synthesis of qualitative and quantitative research methods, data collection, and analysis techniques in order to answer research questions (Johnson, Onwuegbuzie, & Turner, 2007). Built on a scientific paradigm of pragmatism (see Johnson & Onwuegbuzie, 2004), mixed-methods designs may be used for triangulation, complementarity, development, initiation, or expansion (Greene, Caracelli, & Graham, 1989). An empirical test of my theory of power-relevant aggressing and helping behaviors using a mixed-methods design aims to: 1) enhance the validity of the constructs, 2) improve the interpretability of results, 3) offset limitations of one method by using another, and 4) provide a more rich and contextual view of the phenomena.

Appendix A shows a timeline of research procedures established to guide this mixed-methods study. In the first phase, a focus group methodology was used to gather salient examples of helping and aggressing as well as school-relevant dimensions of power. Vignettes

were created based on the focus group responses for the quantitative phase to ensure the most salient power-relevant behaviors were reflective of the school culture and gender of student participants. In the quantitative phase, students rated the similarity of varying interpersonal behaviors within contextualized vignettes in order to determine the dimensional structure of power-relevant interpersonal behavior among participants in a dyad. Then, the focus group data were qualitatively analyzed in order to understand beneficial/harmful social interactions and social power in the specific peer ecology of the school, including causes of social power, consequences of social power, and characteristics associated with social power. Using inductive analysis, themes were coded to understand students' perceptions of whether relative power affects the impact of aggressing/helping behavior.

4.1 - Study Aims

   4.1.1 – Focus Group Data Collection and Vignette Construction. The first phase uses a focus group methodology in order to develop vignettes of dyadic interactions between students who are most reflective of the school culture.

   Aim 1.1: What are salient examples of helping and aggressing behaviors among adolescent high school students at their school? Interpersonal behaviors, such as helping and aggressing behaviors, are universally occurring among students across school cultures. However, the most salient examples of helping and aggressing behaviors, which occur within the unique school culture in this study, remain unknown. Using an emic approach in this study addresses this gap by exploring interpersonal behaviors in-depth and from the perspective of the agent and recipient in the specific cultural context (Hui & Triandis, 1985). Because gender differences in subtypes of prosocial behavior and aggression have been found (Bergin et al., 2003; Smith, Rose, & Schwartz-Mette, 2009), adolescents discuss whether helping and

aggressing behaviors differ among girls and boys within their school culture for gender-specific examples.

Aim 1.2: What are salient examples of social power among adolescent high school students at their school? Group-based human social hierarchies universally occur across cultures and time (Sidanius & Pratto, 2012), suggesting relative power imbalances are normative in social groups. An emic approach identifies the specific forms of relative power most salient to students in their peer ecology at school. Based on student responses in a focus group on prosocial behavior, Bergin et al. (2003) remarks that power, in the form of assertiveness, was a "dominant theme for this group of (adolescent) boys," (p. 25) but this relationship was not noted for adolescent girls. As a result, focus groups of adolescents explore forms of power for girls and boys.

4.1.2 – Survey Data Collection and Analysis. The second phase uses a derived etic approach in order to develop gender-relevant vignettes based in the peer ecology of power-relevant social interactions at their school. Specifically, quantitative data are gathered based on adolescents' perceptions of social interactions through their similarity responses of paired vignettes. These responses are used to test the two-dimensional model in four sets of analyses: 1) adolescent responses to interpersonal behaviors of boys related for academic power, 2) adolescent responses to interpersonal behaviors of girls related for academic power, 3) adolescent responses to interpersonal behaviors of boys related for social power, and 4) adolescent responses to interpersonal behaviors of girls for social power.

Aim 2.1: Are beneficial and harmful interactions dimensional opposites based on a bipolar benefit/harm continuum? Separate studies have explored the dimensional structure of helping (Pearce & Amato, 1980; Smithson & Amato, 1984), aggressing (Parrott & Giancola,

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2007), and antisocial behaviors (Frick et al., 1993). However, prior research has yet to explore the dimensional structure of these interpersonal behaviors in a single study with a relational focus on dyads, despite empirical evidence linking these "opposite" behaviors. For example, proactive prosocial behavior and proactive aggressing correlate positively (Boxer, Tisak, & Goldstein, 2004). Additionally, coercive and prosocial behaviors are noted for their functions as resource control strategies (Hawley, 2003).

A two-dimensional solution is expected with a benefit-harm continuum for the first dimension. This aim is disconfirmed if (a) benefit-harm does not emerge for the two-dimensional solution with behaviors that benefit on one side of the dimension and behaviors that harm on the other side.

Aim 2.2: Do students perceive relative power as a critical dimension? If power emerges within the two-dimensional space in concordance with the proposed dimensions, the hypothesis is supported. This aim is disconfirmed if relative power does not emerge as the second dimension, ranging from greater agent power relative to the recipient through balanced power to greater recipient power relative to the agent.

Aim 2.3: Is the two-dimensional model replicable for boys and girls? After the dimensionality of the model is confirmed for both boys and girls by the stress index, scree plot, and interpretability of the coordinates, visual inspection is used to compare male and female responses. If both dimensions are labeled with the same construct, then the models are supported and the theory generalizes across gender.

Aim 2.4: Is the two-dimensional model replicable across types of power? The same process for gender is applied to confirm the models across power types. If the two dimensions do

not emerge then the proposed theory is altered to reflect the single or multiple emerging dimensions.

4.1.3 – Qualitative Analysis of Focus Group Data. Transcripts from the two focus group sessions are analyzed using an opening coding, inductive approach based on grounded theory, in order to explore power and other salient themes to adolescent male and female students.

Aim 3.1: Is power salient in how students perceive interpersonal behaviors that help and harm between students at school? Prior research has noted the moderating impact of relative power when linking aggressive behavior and victim harmfulness (Hunter et al., 2007) from an etic approach using quantitative methodology. The use of an emic approach with adolescent students allows for a qualitative extension of prior research and further understanding of the two dimensions (e.g., impact and relative power) proposed in this study from the perspective of adolescents themselves.

Aim 3.2: What other salient themes emerge from students when discussing interpersonal behaviors and power at school? The inductive process allows for unexpected concepts to emerge from students' remarks to focus group prompts.

Chapter 5 – Focus Group Data Collection

In order to address Aims 1.1 and 1.2, two focus group sessions were conducted with male and female adolescents. Statements and questions prompted student responses regarding salient examples of benefitting and harming interactions. Details regarding the focus group participants and relevant study procedures are provided below. In order to accomplish Aims 1.1 and 1.2 of the study, the procedures and results of the focus group data analysis are presented.

5.1 – Participants

The 24 focus group participants were adolescents in 9th, 10th, 11th, and 12 grades at a junior/senior high school in northeast Ohio. The lead researcher requested two focus group samples from the school counselor to best represent the general composition of the high school population. Based on feasibility, the school counselor developed the most representative sample possible for the first focus group session and a convenience sample of students for the second group.

The first sample approximated the demographics of the school: equal number of participants across four grade levels, equal number of boys and girls, and proportional representation by race (predominantly Caucasian participants). The composition of the school is 97% Caucasian with higher economic security (i.e., less than 15% of students received a reduced or free lunch). The second sample was a convenience sample nominated by teachers. Table 4 shows the demographic information for each focus group.

5.2 – Procedure

5.2.1 – Site Selection

The focus group was held in a naturalistic setting for students – their junior/senior high school. The selected school is located in a rural town near Cleveland, Ohio. Prior to the 2015-

2016 academic year, the school served five communities with the largest township population of 3,800 people. In 2015, the local school board and a neighboring district's school board each voted unanimously consolidate the two school districts into one. As a result, in the 2015-2016 academic year, a neighboring high school was closed and students from multiple communities began attending the school site selected for this study.

Pellegrini et al. (2010) summarized a plethora of research regarding the increased rates of aggression and bullying during school transitions (e.g., as students graduate middle school and begin high school) due to the increased rate of dyadic contests between students in order to situate themselves in an unclear social hierarchy. With a single school building for students in grades 7 through 12, the student transition from junior high to senior school may be easier at this site compared to other school settings where students from multiple middle schools integrate into a single high school. Consistent with past research, I expect the integration of two schools in the current academic year based on rare circumstances (i.e., the closing of a school due to financial issues) to affect social power and make power imbalances among students more salient.

5.2.2 – Participant Recruitment

Following selection of potential participants by the school counselor, school officials and research co-investigators sent a recruitment letter to the parents of the potential participants (see Appendix B) with instructions to return a signed consent form if they permitted their child to participate in this research study (see Appendix C). Students with signed consent forms were given permission to miss a class period in order to participate in the focus group session during the school day. Before beginning the focus group, students were informed of their choice to participate and asked to sign an assent form, which a co-facilitator then signed as witness.

5.2.3 – Moderators

The lead author, a male graduate student, and a female undergraduate research assistant co-facilitated each of two focus groups during a single 55-minute class session in order to explore the perception of students regarding their own social interactions with others. Both facilitators had a basic knowledge of adolescent development and personal experiences working with youth in training and facilitation capacities. Additionally, these co-facilitators held two pilot focus group sessions with undergraduate students in order to develop familiarity with the study procedures and improve their facilitation skills. Both facilitators had completed Title IX training on how to work with minors and report abuse to university officials in the event that any student remarks were made related to abuse. An undergraduate research assistant served as the videographer in order to video and audio record the focus group sessions. Although she did not interact with youth, she also completed Title IX training to work with minors and report abuse.

5.2.4 – Focus Group Sessions

Students entered the classroom and selected the seat of their choice from a U-shaped desk arrangement. Snacks were offered to the participants while the co-facilitators introduced themselves and explained the general purpose of the focus group. Students were then informed of their choice to participate in the study and asked to sign an assent form, if they agreed to participate. A co-facilitator signed the assent forms of students as a witness (see Appendix D).

The videographer began taping in order to capture the introduction session and focus group dialogue. As a warm-up activity, students were asked to introduce themselves and share their year in school and favorite character (from television or a movie). Six ground rules were shown on a visual aid and reviewed in detail by the co-facilitators (see Appendix E). Discussion

proceeded following the discussion guide and concluded at the end of the 55-minute class period. Videotaping was stopped as students left the classroom.

5.2.5 – Discussion Guide for Questions

The discussion was based on a semi-structured guide for a total of six focal questions and 13 follow-up questions (see Appendix F). The six focal questions were listed on a visual aid at the front of the classroom. After the first question was presented, the following five questions were covered in order to keep the conversation focused on the specific topic/question and associated (follow-up) questions.

5.2.6 – Transcribing Process

Following the focus group session, the lead author and research assistants viewed the videotapes and transcribed the students' verbal remarks using Microsoft Word 2010. Remarks were transcribed verbatim with each word spoken and utterances (e.g., um, like) in order to capture students' actual language. On the transcript, an identifying code (e.g., Boy 1 for the first boy in the U-shaped classroom, from left to right) was used in order to protect the anonymity of the participants.

5.3 – Analyses for Aim 1

In order to achieve Aims 1.1 and 1.2, the lead author and dissertation chairperson reviewed the students' responses from the first focal question and follow-up questions related to aggressing and helping behaviors for boys and girls and selected the most relevant behaviors for vignette construction. Then, they reviewed the students' responses to the questions related to the characteristics of powerful people and causes of power. The two most salient power dimensions were selected for the vignettes.

Students provided numerous examples of direct remarks, online/social media, and rumors that spread to multiple people (e.g., telephone game). Because the relational context of dyadic social interactions was emphasized for this study, student examples of salient direct interaction were selected to form the relevant vignettes for the quantitative study (see Chapter 6). It is noteworthy that direct verbal remarks are the most frequent form of bullying (Luxenberg, Limber, & Olweus, 2014; Rivers & Smith, 1994) and threat type used by students in schools (Cornell, 2016).

Students from the second focus group session provided examples for positive and negative remarks that targeted a peer's academic performance. More specifically, receiving and then sharing test scores was mentioned by two girls as a situation that might prompt a positive or negative remark from peers about their scores. For example, a girl discussed a negative remark about a test score, "…your friend got a higher grade on the test in whatever class then you so then you're like, 'Well you had more time to study so….' You know. They just kind of like belittle your achievement in doing well just to make themselves feel better." Another girl mentioned a positive remark after a test by saying, "…someone who was in the same class as me that did really good on a test. I was like, "Wow, you really did good on that test."

Honors class status was mentioned by a student in each of the focus groups in response to questions about power. In response to the facilitator's question with Focus Group 1, "What other things are aspects of power?", a girl stated, "…if you get really good grades in school. Like the top of the class people."

A girl in Focus Group 2 made a more detailed statement when she said:

I think power is like how well you are doing in school like between people who are like

the honor students and like regular students. I feel like sometimes, of like, the people

believe that like honors kids are trying to show off and stuff like that and sometimes the

honors students think that they are better than the other students.

Thus, vignettes regarding academic-related remarks were constructed with the salient power type of honors vs. non-honors status.

Across both focus groups, family name was a salient example of power. In Focus Group 1, it was mentioned by one student and affirmed by two students. For example, a boy said, "Did someone say family names? Yeah, definitely… 100%... there are just families that have been going to (school name) literally forever." A girl responded:

But it's not just within the school, it's with everything. It's like with the cops in (Town

name). You will not get in trouble if your last name is this, no matter what you do. If I do

the same thing as someone else with that last name, I could get kicked off the volleyball

team. There's so many things that could happen to me. I could lose scholarships. It just

gets… nothing gets said if someone has a last name.

In Focus Group 2, the first response from the facilitator's question of "What gives someone power?", a girl replied: "Their family, like their older siblings." It is possible that "family names" may be more salient for this particular community context, given the rural nature of the community and the recent closing of a neighboring high school and an influx of students to this consolidated high school.

Girls and boys noted that verbal marks, especially compliments, were beneficial actions. In Focus Group 1, a boy mentioned saying "hello" as a positive verbal remark: "We were just saying 'hi' to the younger kids who are new to the building...just puts a smile on their face so they know that someone cares and someone's looking out." In Focus Group 2, "compliment" was mentioned 12 times by seven different girls. For example, one girl remarked, "I think that

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compliments are one of the best things that benefits everybody. It makes you feel good. It makes

the other person feel good." Gender norms and expectations of receiving and performing social

interactions were remarked upon by five students in Focus Group 1 and four students in Focus

Group 2. Vignettes regarding compliments/insults were constructed with the salient social

power type (i.e., family name), but the content of the compliment/insult was made gender-

specific (i.e., hair for female students and shoes for male students). These gender-specific

remarks were based on a series of comments by students in Focus Group 2. A girl said, "Guys

just think it's so socially unacceptable to comment on each other. I mean they might say

something about their shoes or something." Then another girl followed up the prior comment by

saying, "Yeah, like say 'oh nice shoe game,' (Laughter) or like 'Man, where'd you get those?' …

And girls are more like, "I like your hair" or like" when did you dye it?"

     After the vignette construction procedure, a female focus group participant reviewed the

vignettes and offered feedback to adjust any of the language to reflect the peer school culture.

Chapter 6 – Quantitative Phase

In order to accomplish Aims 2.1 and 2.2, students rated the similarity of social interactions varying in levels of intensity of benefit/harm and of relative power so that multidimensional scaling (MDS) might be used to determine underlying dimensions. The primary two aims for this phase are to test whether the student responses fit with the proposed two dimensions in my theory of power-relevant aggressing and helping (described in Chapter 3). As part of this examination, I explored whether the findings replicate across student gender and power types.

6.1 – Participants

High school students (in grades 9th, 10th, 11th and 12th) from the same school as the focus group sessions were invited to participate in the study. Of the 404 student participants invited, 53% of students received parental consent and gave assent to participate in the survey. Of the 214 survey respondents, five respondents did not complete at least 50% of the survey and six respondents circled "no" to the statement "I am taking this survey seriously." The remaining 203 students were included in the analyses. The demographic data for the survey respondents is shown in Table 5. More juniors (35%) and fewer sophomores (16%) completed the surveys than would be expected given the school had 102 students in 9th grade (24.5%), 111 students in 10th grade (26.7%), 102 students in 11th grade (24.5%) and 101 students in 12th grade (24.3%).

6.2 – Materials

6.2.1 -- Vignette Development

As discussed in Chapter 5, my analysis of the focus group sessions, and that of my dissertation chairperson's, suggests academic achievement and family status as salient types of power for this school, and academic-related and appearance-related verbal remarks as pertinent

beneficial/harmful behaviors for each type of power. Furthermore, as discussed in Chapter 5,

analysis of focus group sessions indicated the importance of creating gender-specific vignettes

for appearance-related remarks in particular and of testing for gender-specificity in patterns of

similarity. Therefore, two sets of vignettes were created, one for boys and one for girls. I

created the vignettes in consultation with my dissertation chairperson and the research assistant

who co-led the focus groups.

In creating the vignettes, the intensity of the benefit/harm of academic-related and

appearance-related verbal remarks was varied to include each type of behavior: extremely

beneficial, moderately beneficial, neither beneficial nor harmful, moderately harmful, and

extremely harmful. Relative power was also varied by including four options for each type of

behavior: high power agent to low power recipient, high power agent to high power recipient,

low power agent to low power recipient, and low power agent to high power recipient.   As a

result, 20 vignettes were created for each power type (academic power and social power) by

crossing intensity of benefit/harm with relative power.

Each vignette includes an agent and a recipient of the behavior, resulting in 80 names

needed for boys' vignettes and 80 names needed for girls' vignettes. Because varying agent and

recipient gender might confound results, names were chosen to reflect same-sex agents and

recipients. These names were randomly assigned into the vignettes from a published list of the

most popular baby names for children born in Ohio for the year 1999 (Social Security

Administration, 2015). After assigning the 80 most popular names for each gender, three

undergraduate research assistants read and reviewed the vignettes, then circled the names that

could be inferred as another gender (for boys' vignettes, names that could be read as girls'

names; for girls' vignettes, names that could be read as boys' names). These circled names were

replaced with the next possible name from the list of popular baby names. At the conclusion of this process, all 40 vignettes for male participants included names that were popular for boys in their state and age group, and that were likely to be misinterpreted as girls' names; similarly, all 40 vignettes for female participants included names that were popular for girls in their state and age group, and that were unlikely to be misinterpreted as boys' names.

For academic-related remarks, the only difference between vignettes for boys and those for girls was use of names in the vignette. For appearance-related remarks, an additional difference between vignettes for boys and those for girls was the type of appearance-related remark.

6.2.1.1 - Academic Power (Honors vs. Non-Honors)

Academic status as an honors student versus non-honors student was used to distinguish the category of academic power for the agent and recipient. Vignettes used a comment after the teacher returns student tests. An example of lower-power to higher-power harming behavior with moderate intensity is shown in the following vignette*:*

> *Jacob is <u>not</u> an honors student and Michael is an honors student. Everyone in*
> *class received their graded tests from the teacher. Jacob then told Michael: "It*
> *looks like you didn't do too well."*

Wording for the specific behaviors ranging from extremely beneficial to extremely harmful is as follows: 1) you're smart for doing well on a hard test, 2) it looks like you did well, 3) it looks like we got our tests back, 4) it looks like you didn't do too well, and 5) you're stupid for doing so bad on an easy test. All vignettes related to academic power for boys and girls are provided in Appendices M and N, respectively.

6.2.1.2 – Social Power (Family Name)

Social power was operationalized by referencing a "family name" with a long-standing history in the local community and beneficial action toward the school. Vignettes used a comment related to appearance, with hair referenced for girls and shoes referenced for boys. An example of lower to higher power moderate harming behavior is shown in the following vignette:

Emily is a student who recently moved to the town after previously attending X High School. Hannah has grown up in town along with her family, who has been here for many generations. Emily points to Hannah's hair and says: "What is going on with your hair?

Wording for the specific behaviors ranging from extremely beneficial to extremely harmful for boys is as follows: 1) where did you get those shoes?! I am going to get some tomorrow, 2) those shoes are chill, 3) are you wearing sneakers?, 4) it's probably time to upgrade, and 5) did you get those shoes from the trash? For girls, wording is: 1) your hair is perf #hairgoals, 2) your hair looks good, 3) did you do something with your hair?, 4) what is going on with your hair?, and 5) when is the last time you showered? All vignettes related to social power for boys and girls are provided in Appendices O and P, respectively.

6.2.2 – Survey Creation

The input data for MDS is (dis)similarity ratings, which forms an object x object matrix. The MDS algorithm aims to minimize the distances between an object and every other object in order to determine the underlying dimensions within categorical space. The most accurate representations of the underlying dimensions require ratings across all possible paired vignettes.

Because academic and social power were to be analyzed separately, and analyses were to be conducted separately by gender, comprehensive pairing had to be accomplished for 20

vignettes for each set of analyses. This resulted in 190 unique pairings ([20 * n – 1], excluding repeating vignettes). I doubled the unique pairings (n=380) so every pairing would appear twice. Because there were two power types, the total number of pairings was 760 for each gender. In order to reduce the response burden for students, 10 survey sets were created by randomly assigning 76 pairings per set until all pairings were distributed across the 10 survey sets. These survey sets were parallel for girls and boys.

To account for any potential bias due to the ordering of the vignettes within pairings, the pairings were counter-balanced by flipping a coin in order to determine which vignette appeared first in the primary surveys (e.g., AB order). After the pairings (and gender-specific names) had been assigned to the 10 survey sets, the BA order of the surveys was created by reversing which vignette was presented first in each pairing. Thus, 40 survey sets were created, AB order for boys, AB order for girls, BA order for boys, and BA order for girls. Each of the 380 possible pairings for each power type appeared four times across the survey sets for boys and girls.

6.3 – Procedure

A recruitment letter was sent to every parent of all students in the school inviting their child to participate during English class (see Appendices G and H). A parent signed the consent form and the student returned the signed form to his/her teacher (see Appendix I).

On the day of the survey, I distributed the surveys to the teachers prior to their respective English classes. English teachers obtained assent from students prior to distributing the surveys (see Appendix J). Teachers instructed students on the survey process and expectations (see Appendix K) and asked students to read each vignette carefully before rating the similarity of pairings (see Appendix L to O). Vignettes were

presented in paired form with a rating scale at the interval level, ranging from 1 to 7 with anchors at 1 (not at all similar) and 7 (very similar) (see Appendix P). The following example shows how the vignettes are presented as Story A and B:

> ***Story A:*** *John is <u>not</u> an honors student and Thomas is an honors student. Everyone in class received their graded tests from the teacher. John then told Thomas: "You're smart for doing well on a hard test."*

> ***Story B:*** *Dominic is <u>not</u> an honors student and Jared is an honors student. Everyone in class received their graded tests from the teacher. Dominic then told Jared: "You're stupid for doing so bad on an easy test."*

6.4 – Results

6.4.1 – Data Entry and Descriptive Statistics

Three undergraduate research assistants entered the survey responses into Microsoft Excel 2010, which I later verified. Research assistants reviewed the surveys numbered 1 to 10, organized by gender for boys and girls and identified the vignette letters corresponding with the pairings for each particular question on the survey. The vignette letters, ordering of the pairing, the survey number (1 to 10), and question number (1 to 76) were all provided on the Excel sheet. The pairings appeared four times within each gender (e.g., Survey 1 AB, Q3; Survey 1 BA, Q3; Survey 4 AB, Q21; Survey 4 BA, Q21) because 380 pairings were used for each power type and the pairings were counter-balanced.

In order to determine which question within each survey contained the same pairing, research assistants searched for matching pairings within the Excel sheet. They then merged the same pairings from multiple surveys into a single master database by cutting student responses from the linked pair and pasting each into the database. As a result, each column had all of the

data associated with a particular pairing (e.g., AC). With the assistance of research assistants, I reviewed and verified the data entered in the master database.

In order to use MDS, the data structure was transformed from the multivariate structure (object x attribute) into an object x object structure, whereby each column and row is a vignette letter (e.g., A through T or AAA through TTT). The result is a symmetric matrix with aggregate scores based on ratings across participants and with each cell corresponding to a vignette pairing (e.g., AB, AC) (see Table 6).

The IBM Statistical Package for the Social Sciences (SPSS), Version 23, was used to analyze the descriptive statistics of the pairings, including the mean, standard deviation, minimum, maximum, and sample size. Separate means for the AB and BA pairing forms were also calculated. Table 7 contains the descriptive statistics for boys and Table 8 shows the descriptive statistics for girls.

6.4.2 – Analytic Plan

MDS uses participants' (dis)similarity ratings to produce an optimal number of dimensions based on the provided parameters (Borg & Groenen, 2005). Non-metric MDS uses data measured in nominal or ordinal form, whereas metric-MDS uses interval or ratio. Interval data were collected using a 7-point rating scale from not at all similar to very similar.

MDS is similar to principal components analysis with regard to the spectral decomposition of the original data matrix, but different because it uses object x object data rather than object x attribute data. Judgment of dimensionality is based on the goodness-of-fit measure (i.e., stress index), visual inspection of the relationship between the raw stress scores and dimensionality in the scree plot and the specific coordinates for each object.

The MDS solution aims to minimize a loss function and produces a stress value between 0 and 1. According to Kruskal and Wish (1978), the stress index may be interpreted with the following criteria: > .20 = poor, .10 - .20 = fair, .05 - .10 = good, .025 - .05 = excellent, and .00 = perfect. This criterion becomes more conservative when using metric MDS (compared to non-metric) and when the number of pairings increases.

The MDS procedure has noteworthy assumptions that may affect this study. Specifically, MDS assumes 0 distance from "an object to itself" (Wilkinson, 2002), "the distance between A and B is the same as B to A", and "the distance from object A to C is less than or equal to the distance from A to B plus B to C". For this reason, the order of the vignette pairs was counterbalanced to negate any empirical errors that could result from the MDS assumption. In this study, I assume any potential bias in responses due to ordering effects are removed by counterbalancing.

The MDS assumption of zero distance may not necessarily hold for theories related to social perception in cognitive and social psychology (Wilkinson, 2002). For example, the ordering of the vignettes, AB vs. BA order, could change the rating of similarity, resulting in unequal ratings of distances between A and B compared to B and A (Wilkinson, 2002). These pairing interpretations can be particularly influenced by individual differences (e.g., Wish, Deutsch, Kaplan & 1976). In this study, however, the broader social factors of the student body (such as racial status and the socio-economic status of their parents) are relatively homogeneous, which suggests limited, if any, differences in paired ratings due to these broad individual difference variables. Furthermore, there is some empirical evidence suggesting ordering effects do not influence similarity ratings (Arun & Christian, 1976). Given conflicting research on the role of order on pairing interpretations and the inability of the MDS formula to evaluate that role,

I used counterbalancing and a relatively homogenous student population to reduce the likelihood of major miscalculations.

The PROXSCAL extension of SPSS was used to determine the underlying dimensions and the conceptual space of the interpersonal behaviors for both genders and both power types. Proximity Scaling (PROXSCAL) is a more desirable extension choice than Alternating Least Squares Scaling (ALSCAL) in SPSS, because ALSCAL uses a derived data set from squared distances of (dis)similarity scores whereas PROXSCAL performs analyses using direct approximations (Commaneur & Heiser, 1993). The data were collected on an interval scale using similarity ratings. As a result, the forthcoming models were analyzed using PROXSCAL with the following syntax for measurement level of the data: interval (rather than ordinal and ratio), proximities: similarities (rather than dissimilarities), criteria for the model included the dimensions: ranging from 1 to n-1. Default recommended criteria were used for the maximum iterations: 100, differential stress: .0001 and minimum stress: .0001.

In order to determine the number of emerging dimensions (i.e., dimensions between 1 and 19), an unconstrained model was computed and the resulting scree plot was used to determine the follow-up analyses. The scree plot displays the stress indices on the y-axis and dimensionality of the data matrix on the x-axis. Dimensionality from visual inspection of the scree plot is selected based on the point at which the slope between stress values is nearly flat rather than vertical.

Four constrained models (with one dimension, two dimensions, three dimensions, and four dimensions) were run for each of the four sets of analyses (Academic Power - Boys; Academic Power - Girls; Social Power - Boys; Social Power - Girls) to examine the relative change in stress scores as the dimensions increased. Kruskal (1964) remarks: "A second

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criterion lies in the interpretability of the coordinates. If the *m* dimensional solution provides a satisfying interpretation, but the (*m*+ 1) - dimensional solution *reveals no further structure*, it may be well to use only the *m*-dimensional solution" (p. 16). In summary, as stated by others, "the goal of conducting MDS is not to reduce stress to zero, but rather to strike a balance between finding a good solution (i.e., one with a sufficiently low stress value) and one that is interpretable" (Hout, Papesh, & Goldinger, 2013, p. 6). As a result, I followed these recommendations and the procedures used by Pearce and Amato (1980) when they explored the multidimensionality of helping behaviors. Therefore, the criteria for selecting an appropriate solution for each matrix were relative change in stress level between the models based on stress indices and visual inspection of the scree plot as well as the interpretability of the coordinates for the possible dimensions. RStudio, Version 0.99.893, with the scatterplot3d package was used to develop three-dimensional plots for each of the four sets of analyses.

6.4.3 – Matrix Solutions

6.4.3.1 – Academic Power - Boys

The scree plot of the unconstrained model, with dimensions ranging from one to 19, is shown in Figure 3. Visual inspection of the scree plot suggests a solution exists between two and three dimensions. The stress indices associated with each of the one-dimensional, two-dimensional, three-dimensional and four-dimensional models are .238, .098, .057, and .030, respectively. The most relative change between stress scores occurred between the one-dimensional and two-dimensional models (Δ =.14), however there was improved fit with the third model (Δ =.041) and high interpretability of the third dimension. As a result, a constrained three-dimensional solution was selected. The coordinates for these interpersonal behaviors in

relation to the three dimensions are provided in Table 9 and three-dimensional plot is shown in Figure 3.

Figure 4 displays the behaviors within three-dimensional space. I refer to the first emerging dimension as a bipolar continuum from benefit to harm. All of coordinates for benefiting and neutral behaviors were negative and all of the harming behaviors were positively related to the dimension. Additionally, the aggregate coordinates for extremely benefitting behaviors were more strongly negative (-.571) compared to moderately benefiting (-.439) and neutral behaviors (-.179). The coordinates for extremely harming behaviors were more positive (.726) when compared to the coordinates for moderately harming behaviors (.463).

The second dimension appeared to reflect the extent of impact of the behavior, and thus, it is labeled the impact - no impact dimension. This dimension had positive coordinates for neutral behaviors (.740, .647, .540, and .603) and had negative coordinates for 14 of the 16 harming and benefitting behaviors.

The third dimension was labeled the collective power of the dyad. Behavior between low power students (i.e., low power agent – low power recipient) had moderately negative or near zero coordinates for extremely beneficial behavior (-.353), moderately benefitting behavior (-.353), neutral (-.047), moderately harming (-.546), and extremely harming (-.029). Behavior between high power students (high power agent – high power recipient) had positive coordinates in relation to this third dimension: extremely beneficial behavior (.168), moderately benefitting behavior (.322), neutral (.379), moderately harming (.292), and extremely harming (.498). Mixed-power dyads were generally not related to the third dimension based on their average coordinates of -.033 (from the ten behaviors).

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6.4.3.2 –Social Power - Boys

The three-dimensional solution was selected as evidenced by the scree plot (see Figure 5) and interpretability of the coordinates (see Table 10). The stress indices for the one, two, three, and four-dimensional models were .187, .081, .049, and .027, respectively. Despite the improved fit of a four-dimensional model as evidenced by relative stress, there was no meaningful interpretation of the fourth dimension based on coordinates. The three-dimensional plot is shown in Figure 6.

The first dimension reflects a benefit to harm dimension. For this dimension, the moderately benefitting behaviors had less negative coordinates at -.550 compared the extremely benefitting behaviors at -.646. The coordinates for extremely harming behaviors were more positive at .733 than the moderately harming at .533. The no impact - impact dimension emerged second. The coordinates for neutral behaviors were -.601, -.618, -.673 and -.648. All four of the benefitting extremely behaviors had positive coordinates above .363 and three of the four harming extremely behaviors were above .320. The third dimension reflected the collective power of the dyad, with coordinates from the interactions between low power agent and low power recipient with negative coordinates at -.353 for benefitting extremely, -.353 for benefitting moderately, -.047 for neutral, -.546 for harming moderately, and -.029 for harming extremely. The coordinates for interactions involving a high-power agent and high-power recipient were positive: .168 for extremely benefitting, .322 for benefitting moderately, .379 for neutral, .292 for harming moderately, .498 for harming extremely.

6.4.3.2 –Academic Power - Girls

According to the scree plot for female responses of interpersonal behavior and academic power, a 2, 3 or 4-dimension solution may be selected (see Figure 7). The stress indices for each

of the models were .286, .091, .046, and .030. The three and four-dimensional solutions denote excellent fit (see Figure 8 and Figure 9). Although incremental reduction in stress is minimal for the four-dimensional model, a four-dimensional model was ultimately selected because of the interpretability of the fourth dimension (see Table 11).

The first dimension is bipolar, from benefit to harm. Specifically, all of the benefitting and neutral behaviors had negative coordinates and all of the harming behaviors have positive coordinates in relation to the first dimension. However, the average coordinate score of the extremely benefitting behaviors and moderately benefitting behaviors were similarly related to the dimension at -.578 and -.533, respectively. The second dimension reflects a dimension of impact to no impact. The extremely benefitting behaviors had coordinates of -.364, -.262, -.243, and -.268 whereas the neutral behaviors had coordinates of .620, .577, .557, and .660. The third dimension reflects the degree of harming, from high to low harm. The moderately harming behaviors had positive coordinates at .419, .355, .373, and .296, whereas the coordinates for extreme harming were negative at -.306, -.303, -.108, and -.553. The fourth emerging dimension was the collective power of the dyad. The coordinates for behaviors between low power members (i.e., low – low) were positive for moderately benefitting behavior (.288), neutral (.212), moderately harming (.385), and extremely harming (.234), but slightly negative for extremely beneficial behavior (-.099). Behavior between high power members in the dyad had negative coordinates for all five behaviors: extremely beneficial behavior (-.307), moderately benefitting behavior (-.229), neutral (-.399), moderately harming (-.292), and extremely harming (-.459). The average score for the coordinates of mixed-power dyads was .063.

6.4.3.4 –Social Power - Girls

For the interpersonal behaviors of girls in relation to social power, a three or four-dimensional configuration emerges (see scree plot, Figure 10). The stress indices were .091, .054, .045, and .030. Despite the excellent fit for the three and four-dimensional solution, a four-dimensional solution was selected because of the interpretability of the fourth dimension based on the coordinates (see Table 12). The three-dimensional plot and four-dimensional scatterplot are provided in Figures 11 and 12.

The first dimension ranged from benefit to harm. Extremely harmful behaviors have negative coordinates at -.756 in comparison to moderately harming at -.682. However, the extremely benefitting did not have higher positive coordinates (.514) than moderately benefitting behavior (.575). The second dimension ranged from no impact to impact with coordinates for neutral behaviors ranging from -.454 to -.400. Coordinates for three of the four extremely harming behaviors were above .245 and three of the four extremely benefitting were above .217. The third dimension reflected the collective power of the dyad with coordinates for interactions between low power agent and low power recipient at .135 for extremely benefitting, .309 for moderately harming, .210 for neutral, .563 for moderately harming, and .209 for extremely harming.

The coordinates for interactions between high-power agent and high-power recipient were -.095 for extremely benefitting, -.259 for moderately benefitting, -.389 for neutral, .201 for moderately harming, and -.314 for extremely harming. The fourth dimension reflected the relative power of the dyad with coordinates associated with high-power agent and low-power recipient as well as low-power agent and high-power recipient relating to this dimension. Coordinates for high-power agent and low-power agent were .240 for extremely benefitting, -

.164 for moderately benefitting, .294 for neutral, .362 for moderately harming and .213 for extremely harming. Coordinates for low-power agent and high-power recipient were -.042 for extremely benefitting, -.256 for moderately benefitting, -.279 for neutral, -.346 for moderately harming, and -.271 for extremely harming.

Chapter 7 – Qualitative Findings

In order to address Aims 3.1 and 3.2, themes from the qualitative data were explored using inductive analysis (Strauss & Corbin, 1990), which means "patterns, themes, categories of analysis come from the data" (Patton, 1980, p. 306). This analysis was based on grounded theory (Charmaz, 2014), which includes "a set of general principles, guidelines, strategies, and heuristic devices rather than formulaic prescriptions" (Charmaz, 2014, p. 3). Research assistants used open coding to ascribe meaning to student responses by coding the initial data and updating emergent categories over time through an iterative process. Ultimately, a theory arose based on the themes and concepts identified from the data.

7.1 – Procedures

Inductive analysis using a theory-driven derivation of grounded theory (Charmaz, 2014; Strauss & Corbin, 1990) was used to examine whether relative power is salient in students' perceptions of the effects of receiving aggressing and helping behaviors. The lead author and dissertation chairperson did not engage in this coding because their preexisting beliefs could bias the inductive process. Rather, a team of four undergraduate research assistants conducted the coding, including three Caucasian women and one African-American woman. All were blind to my theory and research objectives. One experienced undergraduate research assistant coordinated the team's activities. The team was informed of the primary coding goal, which was to condense the student remarks from the focus group transcripts into broader concepts and themes, and given a timeline with target dates to meet for each phase of their coding. The coding team used Dedoose (Version 7.0.21), an online mixed-methods software application, in order to store the transcripts and code the excerpts.

In order to identify broader concepts and themes, each member of the coding team first independently used the following "meaning making" procedures: 1) read through each focus group transcript three times, 2) decide on what content is meaningful (e.g., on- and off-task) by highlighting the specific excerpt (e.g., a word, phrase, sentence, sentences) using the Dedoose software, 3) characterize the meaning of the excerpt by writing a unique and specific description, 4) read through the excerpts and their descriptions again and apply a broader code identifying concepts based on similar and repetitious descriptions, and 5) identify themes by grouping similar concepts. Thus, themes were the broadest level coded, concepts were nested within themes, and specific excerpts were nested within concepts.

After each coder individually completed the "meaning making" phase, the group held a team meeting to discuss the excerpts, concepts, and themes they noted from the transcripts. Then, coders had five days to revisit and revise their codes by adding or dropping themes and concepts before the final group meeting. At the final group meeting, each coder brought her own tables of themes, concepts, and excerpts. The team leader reviewed each coder's table and wrote the themes and concepts on a dry erase board if two or more coders identified similar words/ phrases in their tables.

Themes and concepts are similar groupings of data, but different levels of abstraction, with themes being broader than concepts. Thus, when one coder identified a theme that another coder identified as a concept, team members discussed the hierarchy of ideas to reach consensus on whether it would be a theme or concept. Grouping of similar concepts created evidence of a broader theme, just as grouping of similar excerpts created evidence for a concept. This process resulted in a master list of the group's conceptualization of the transcripts using a grounded theory approach.

7.2 – Findings

Three themes emerged from the focus group transcript data: school atmosphere, power in the school, and bullying. Within each of these themes, concepts also were identified. Excerpts provided evidence for the concepts, which in turn provided justification for a higher-order theme. Excerpts are noted with quotation marks and italics. Concepts are noted with italics and bolded.

A visualization of the themes and concepts is provided in Figure 13. Red was used for the concept color if a supporting excerpt mentioned aggressing only, blue was used if a supporting excerpt mentioned helping only, and purple was used if both aggressing and helping were mentioned. If neither behavior was mentioned, green was used.

7.2.1 – School Atmosphere

The first emergent theme, school atmosphere, is a broader term encompassing school climate, culture, and environment. Within the school atmosphere theme, six concepts were identified, including ***negative interactions with others***, ***positive interactions with others, receiving harmful actions, receiving beneficial actions, gender differences, and town culture***. The lead author organized the concepts from the master list based on the benefit and harm dimension first and then based on the order of the list presented by the coders. All of the excerpts supporting each of these concepts are provided in Appendices Q, R, and S. Presented below are the excerpts selected by the lead author based on their relevance to the concept. Only content and context-rich excerpts were provided. Short excerpts selected by the coders, but not easily interpretable by the lead author without significant context (i.e., statements made by other students), were excluded in-text and shown in Appendices Q, R, and S.

7.2.1.1 – Negative Interactions with Others

Most of the excerpts associated with the first concept emerged from the first focus group question: "What are the most common behaviors between students at your school that harm others?" Students reported salient examples of harming behaviors, which are reflected by the excerpts below:

Boy 2 (Focus Group 1): "Everybody just swears at each other."

Girl 1 (Focus Group 2): "They say something and it's not actually like what happened, but people keep spreading it and so it turns into something like someone did this and it's like, "no that didn't happen at all."

Girl 4 (Focus Group 2): "Uhm maybe, just for a random example like your friend got a higher grade on the test in whatever class then you so then you're like, "Well you had more time to study so...." You know. They just kind of like belittle your achievement in doing well just to make themselves feel better because maybe they didn't put in the effort."

These excerpts reflected verbal comments that harm others, such as foul language, rumors, and belittling academic achievement.

7.2.1.2 – Positive Interactions with Others

The next focal question aimed to elicit helpful behaviors by asking students: "What are the most common behaviors between students at your school that benefit others?" Students provided examples of the various forms of prosocial behaviors:

Girl 7 (Focus Group 2): "Compliments are one of the best things that benefit everybody. It makes you feel good. It makes the other person feel good."

Girl 5 (Focus Group 2): *"Yeah and I feel like it's definitely like when the behavior is like more educational, like I said for example, someone who was in the same class as me that did really good on a test. I was like, 'Wow, you really did good on that test.'"*

Girl 4 (Focus Group 2): *"...it makes you feel a little bit less lost if you're that kid like picking up all of your stuff in the hallway and you're like, 'I'm gunna be late to my class now.' Somebody just picks up one paper. Like it didn't really help you that much, but you're like, 'Thanks! You're a lifesaver.'"*

Boy 2 (Focus Group 1): *"I feel like I just see people smiling here all the time. Like, people are pretty happy here.*

The first two excerpts are examples of complimenting and encouraging others, the second excerpt focuses on a specific academic-relevant interaction, and smiling is referenced in the fourth excerpt. Coders grouped these excerpts together as demonstrating positive interactions with others.

7.2.1.3 – Receiving Harmful Actions

The next concept was ***receiving harmful actions***. Two female girls from Focus Group 2 (no boys) provided examples of how aggressing remarks are often thoughtless:

Girl 3 (Focus Group 2): *"A lot of the times, I feel that people make comments without much thought or emotion to it and they don't realize how harmful it is."*

Girl 6 (Focus Group 2): *"I think off the cuff remarks have a bigger impact than people think. Like cause that's the kind of stuff like that can sit with you like all day or all week or for like a really long time."*

Three boys in Focus Group 1 (no girls) emphasized the importance of perception, such as the recipient perceiving the intention of the agent and choosing how to interpret the harmful action:

> **Boy 3 (Focus Group 1):** *"We talk crap to each other knowing that we're not actually mad at each other."*

> **Boy 2 (Focus Group 1):** *"I just feel like you shouldn't take anything to heart. Like, everyone's always gonna – I mean you're not gonna go through life without someone not liking you, so."*

> **Boy 1 (Focus Group 1):** *"There's only a certain level of tolerance you can have when it comes to this before it starts to hurt, so like he was saying just shrug it off, but there is a point where you should just stand up and confront it."*

The gender difference of receiving harmful actions is based on girls' responses in Focus Group 2 and boys' responses in Focus Group 1. Girls discuss the impact of harm and excerpts from boys highlight different ways of perceiving harmful behavior.

7.2.1.4 - Receiving Beneficial Actions

The primary prompt that led to responses grounded under this concept was: "What are the most common behaviors between students at your school that harm others?" A concept supported only by excerpts from girls in focus group 1 had to do with the positive feelings associated with receiving beneficial actions from others:

> **Girl 4 (Focus Group 2):** *"Like you could be having the worst day ever and someone is like, 'Hey, your hair looks really nice' and you're like, 'Thank you, so much!'"*

Girl 6 (Focus Group 2): "Yeah, I feel like that's one thing that I've noticed like at (school name), I guess, is that like people go out of their way to compliment you and stuff. And like, yeah. And then that in turn you're like, 'Oh, someone said that to me!'

Girl 1 (Focus Group 1): "When someone goes out of their way to talk to you and to give you a compliment when you don't typically talk to them, then that makes you feel better."

7.2.1.5 – Gender Differences

When referring to social interactions and power at school, the lead author and co-facilitator would ask: "Is it different for boys versus girls?" In fact, this question was asked on five separate occasions as a follow-up question from the focal question in order to explore gender differences. It is therefore not surprising that coders identified participant responses regarding gender norms and how social interactions affect each gender differently as a concept. The following excerpts are examples:

Boy 1 (Focus Group 2): "They (girls) just do it in different ways. So like the comments, pictures, like everything is the same, but they have their own little set of rules with inside each other."

Girl 1 (Focus Group 2): "So like when a couple has a picture, like girls will be like, 'Oh my god, you're so cute. I ship it.' And then like another guy is gunna be like, 'Bro good job,' and then like (laughter)… They'll say something like that instead of like, you know what I mean? They have like a different way of saying a compliment that doesn't make them seem like they are girly."

In addition to the social interactions differing, these behaviors are received differently based on gender, according to the student responses:

Girl 1 (Focus Group 2): "I think girls care more about what is said then guys do because guys just kind of push it over their shoulder, but girls take it more to like heart."

Girl 3 (Focus Group 2): "Guys don't really – brush things off and don't care because just in my opinion, don't care for stuff like this because it's really petty and it just doesn't matter half the time. Whereas girls just belittle each other to make themselves feel better, which I feel can get you absolutely nowhere and can do the other person more harm then it will end up doing to you at any point in time."

7.2.1.6 – Town Culture

Coders identified the concept of "Town Culture" from excerpts from Focus Group 1, primarily in response to the questions: "Describe who is powerful at this school? And what gives them power?" As shown in Table 13, students from Focus Group 1 referred to families with "specific last names" that have power in relation to the teachers at school and police officers in the community. Additionally, students perceive their school to be different from other schools based on three specific excerpts. Every student fits into a group, the football players are not "jockish" as expected at other schools, and the small school allows rumors to travel quickly. This theme was also evident in the following excerpt, which was in response to: "What is power between students at your school?":

Boy 2 (Focus Group 1): "It's a really, really small, old-school town… There are just families that have been going to (school name) literally forever."

7.2.2 – Power in the School

Within the theme of Power in the School, there were seven concepts: ***positive things people do with power, negative things people do with power, gaining power, behaviors of powerful people, personality traits of powerful people, effects of power, and interpreting power***

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interactions. These concepts were organized with the same method as the prior theme. The concepts are discussed in detail below with selected supporting excerpts. All of the excerpts supporting each of these concepts are provided in Appendix R.

7.2.2.1 – Negative Things People Do with Power

Similarly to the concept of ***negative interactions with others***, this concept focused on harming behaviors, but under the condition that a powerful person was the agent of the action. These responses were derived from three questions, but primarily: "What do students do specifically with power that harms others?" Some supporting excerpts from Focus Group 1 showed the lack of perceived negative consequences for the bully and presence of negative consequences for the potential upstander to the bully:

> ***Boy 1 (Focus Group 1):*** *"I feel like people of power just use their power to do negative and get away with it, not have to suffer the consequences of it."*

> ***Girl 1 (Focus Group 1):*** *"…the person of power, like, there are other people of power that are on the same sports team but they won't say anything to her. They just leave her alone. They let her bully the rest of us and let her say whatever she wants because they don't want to have to deal with the consequences of saying anything, or standing up for anyone I guess."*

Other supporting excerpts noted a self-perpetuating cycle. The following two excerpts from girls in Focus Group 1 demonstrated this point:

> ***Girl 4 (Focus Group 1):*** *"I know on our soccer team seniors are like 'Freshman do this, freshman do that.' They're just rude. It's like grade levels – you look down on everyone. Like, when you're a senior you're a big bad senior. Let's just make everyone else feel like crap."*

Girl 8 (Focus Group 1): *"I feel like that happens because that's what happened to them when they were freshmen so then once they get to seniors they're like 'I'm gonna do it twice as bad' so then everyone follows that pattern and then eventually it gets really bad."*

7.2.2.2 – Positive Things People Do with Power

This concept is supported by participant responses from both focus groups to the question, "What do students do specifically with power that benefits others?" Forms of prosocial action were identified by students as being performed by powerful people in Table 14.

7.2.2.3 – Gaining Power

This concept was based on excerpts from both focus groups to the following focal prompt and follow-up question, "Among students, describe who is powerful at this school," and the follow-up question of "What gives him/her power?" A female student speculated that goal-directed harmful actions make someone feel powerful:

Girl 6 (Focus Group 2): *"The meaner people are sometimes they do that to make themselves feel powerful. You know so they're not necessarily powerful, but it's just like that everyone else is kind of scared of them."*

Students discussed the power of groups and the social hierarchy, implying that students who are members of these groups can gain power at school:

Girl 1 (Focus Group 1): *"I feel like some sports teams are kind of over other sports teams. I feel like football is sort of like the main sports team, it's the focus of everything and then you have like your volleyball teams and then your soccer teams and golf teams."*

Girl 7 (Focus Group 1): "I think (power is) like put on a popularity scale or people that play sports compared to people who don't. Or if you get really good grades in school… like the 'top of the class' people."

Students denoted the importance of support from friends from within these groups in order to gain power at school:

Girl 3 (Focus Group 2): "Popularity has a really, really big impact on this because you're going to talk or gossip to the most popular, cheerleader, prettiest girl in school over the outcast that doesn't do much because of the fact of the social account of who actually talks more or has more friends in the circle and who they, uhm, who they can talk to faster and easier without having an issue starting."

Boy 1 (Focus Group 2): "If you're on a sports team like and you have most of those people to back you up with your opinion, I think that's where most of the power comes from. Or if you're in band or you're in a club, whatever your view on something is and how many people you have to back you up, I think that's where most of the power comes from instead of like stereotypes like a senior quarterback on the football team being like all popular and everything or like the cheerleader, like she said."

In summary, student responses highlighted a few ways to gain power: by being mean, identifying with a specific group that has power, or affiliating with supportive friends.

7.2.2.4 – Behaviors of Powerful People

Behaviors of powerful people included girls' remarks for behaviors that were not categorized positively or negatively but are simply displayed by people with power. Six different questions prompted excerpts for this concept. In these cases, the behaviors involve powerful people standing up or going against the norm:

Girl 6 (Focus Group 2): *"I think with power…you not only stand up for other people because you are more confident, but like you also stand up for yourself a little more."*

Girl 1 (Focus Group 2): *"I kind of feel like if the people that have more power and they stand up for themselves, I kind of feel like they're more people to be like I'm not going to mess with that person because I know that they will stand up for themselves or they have people that stand up for them because they are a nice person so like you kind of have the power of other people too like coming together with you because they know that you're a nice person and like if something is said that isn't true, it goes back to like people are going to stand up for you because you stood up for them."*

Girl 2 (Focus Group 1): *"She'll do anything to get where she wants to go. It doesn't matter who she hurts or…"*

7.2.2.5 – Personality Traits of Powerful People

Coders identified this concept based on responses to the focal statement of "Describe who is powerful at this school" and the follow-up question of "What are the characteristics of powerful students?" Though coders did not distinguish positive, neutral, and negative characteristics, I have ordered excerpts of characteristics according to valence in Table 15.

7.2.2.6 – Effects of Power

This concept was based on participant responses to three sequential questions that altered the relative power between the agent and recipient for aggressing actions: 1) Does it feel different to receive a harmful behavior from someone who has <u>less power</u> than you?, 2) Does it feel different to receive a harmful behavior from someone who has the <u>same power</u> as you?, 3) Does it feel different to receive a harmful behavior from someone who has <u>more power</u> than you? The same three questions were repeated but in the context of beneficial behavior. Although

four of these questions were prompts related to the excerpt, most of the excerpts for this concept were prompted by: "What is power between students at your school?" In this section, students discussed power types and the consequences:

> *Girl 7 (Focus Group 2): "I think power is like how well you are doing in school like between people who are like the honor students and like regular students. I feel like sometimes, of like, the people believe that like honors kids are trying to show off and stuff like that and sometimes the honors students think that they are better than the other students."*

> *Girl 4 (Focus Group 2): "I think that seniority is definitely power between students. I don't mean to say that as 'Oh, I'm older, I'm better,' but it's like, I don't like, I can't say from a senior perspective now but like as a freshmen I was like, 'Oh my god, the seniors.' So like they are just like holy spirits sometimes. Like deities, you know I don't know really what I was trying to get at."*

> *Boy 1 (Focus Group 2): "Like when you're in a sport, like a high school sport, and the elementary school kids or the kids who are just learning how to play and they are like really short and they are looking up to you like, 'Wow that is so cool and you're like starting on the varsity team and all this.' They're, they want to be as good as you. They want to be like you when they get older."*

According to the student excerpts, academic power relates to bragging to others whereas seniority relates to a clear status hierarchy, such as younger children perceiving older athletes as role models. These examples suggest that power relates to other valued outcomes.

7.2.2.7 – Interpreting Power Interactions

The same six questions that resulted in the emergence of the prior concept also provided excerpts that supported this concept of interpreting power interactions. The following examples from Focus Group 2 demonstrate how students perceive power-related interactions:

> *Girl 4 (Focus Group 2): "I definitely think that it would definitely be more harming from a person with more power because you sort of look up to them and it's like you sort of aspire to be what they are and if they were to insult you or pick on you in any sense like who I wanna be just hurt my ego and my feelings and that would definitely hurt a lot more cause that's what you are looking towards in the future and then you are like, 'That was mean.'"*

> *Girl 3 (Focus Group 2): "If someone that is obviously more popular and more social and everything goes up to you and says, 'Hey! Nice job at whatever you did the other day.' I feel like it hits closer to home for you instead of like an underclassmen or like a seventh grader being like 'Hey! Nice job at whatever you did.' It doesn't have as much as an impact as someone who took it into consideration and like noticed."*

> *Girl 1 (Focus Group 2): "…like you're best friend saying, 'You look pretty today' and you're like 'thank you' because you're my best friend and I kind of like, not expect it but it's like not shocking that your best friend tells you that you look good, but like some senior that you've met 3 times is like, 'Wow! You look really nice today' is really going to impact me and I'm going to be like, 'Thanks, I am going to wear this outfit more.' It just kind of like depends on like who's saying it."*

As these examples show, coders grouped excerpts together that involved differential impact based on relative power and differential impact having to do with relationship closeness.

7.2.3 – Bullying

Negative social interactions and the negative actions taken by people with power may seem to be related to the concept of bullying, but coders perceived this as an overarching theme with different concepts. These concepts had to do with the means of bullying, ***in-person*** versus ***online/ social media,*** as well as ***negativity in the school.*** The full list of excerpts, for each of these concepts, is provided in Appendix S.

7.2.3.1 – In-person

This subtheme concept focused on in-person interactions that reflected bullying. All of the excerpts involved verbal comments and rumors involving groups of people, which were prompted by one question: What are the most <u>common</u> behaviors between students at your school that <u>harm</u> others?

> ***Boy 1 (Focus Group 2):*** *"I'd probably say that verbal comments, if anything, whether they are just messing around with somebody or if they are being serious; just calling them names or spreading rumors. I think that's the biggest one…saying things about other people and blaming other people for things that they didn't do."*

> ***Girl 4 (Focus Group 2):*** *"I think that one of the things that is kind of bad here is that we just say things and don't think about it. So, wrong information gets spread, therefore, rumors happen."*

7.2.3.2 – Online/ Social Media

Online and social-media-based bullying involves negative interactions via the Internet or phone applications. These excerpts were also prompted by the first focus group question relating to salient examples of harming. The follow-up question regarding gender differences was also

related to this concept. In all of the excerpts, girls from Focus Group 2 highlighted the notion of anonymity, which is often associated with "cyberbullying":

> ***Girl 1 (Focus Group 2):*** *"Blackmail pictures. Like they will take a picture of you and like while you're just doing something and you look really stupid and then like they post it and like things that are on Ask FM. They can just ask you questions either anonymously or like with their name after it and people just hide behind their account because they're not brave enough to say it to your face. Because most likely, they are just saying stuff to you to make themselves feel better."*

> ***Girl 7 (Focus Group 2):*** *"Social media kind of makes it easier to harm others because even if they're not anonymous, it's like you're not face- to-face with the person so it kind of makes it easy and like, if you don't want to like, the aspect of like you don't want to deal with it, you can kind of just turn it off. Like what you can't do in school."*

> ***Girl 5 (Focus Group 2):*** *"Or it's kind of like, you know like, a best friend could have said something. Like to the account or whatever and DMed them and like you become paranoid because like, who said what?"*

7.2.2.3 – Negativity in the School

Negativity in the school was a concept within bullying. Five questions prompted responses related to this concept. The excerpts provided by students related to a general sense of fear, jokes that hurt, and being "fake".

> ***Girl 2 (Focus Group 1):*** *"There's this one girl who seems to have a lot of power and people seem to be really nice to her and put her on a pedestal because they're scared to not. And I think a lot if it is just people are scared to put themselves out there to stop somebody else from doing something."*

Girl 4 (Focus Group 2): *"Often even your friends kind of say something maybe sarcastic, but it might not feel sarcastic."*

Girl 1 (Focus Group 2): *"Like they are like Mean Girls in that movie, Regina George is like, "Oh my god, I love your skirt and then like she walks away and says, "That's a terrible looking skirt." I've seen people literally do that before. Like why would you do that? Like why would you compliment her if you don't like it? Cause that's just making you look, that's just making you think like, oh wow, that makes me feel good, but she really doesn't so that shouldn't make you feel good. Like, I don't know."*

7.3 – Saturation of Themes and Concepts

Saturation of themes and concepts is a key aspect of grounded theory (Charmaz, 2014). Two focus groups used the same set of guided questions in order to saturate the themes and concepts, but the degree of saturation is unknown. In order to determine the elements of these concepts, the lead author reviewed the list of excerpts on Appendices Q, R, and S. The origin of the excerpt was determined by finding the focus group question that prompted the specific student's response. Every excerpt was linked to a focus group question. Within each concept, a count was determined based on the number of times the focus group question prompted an excerpt that was used for the particular concept. Data were entered into Excel 2010 and then uploaded into the social network analysis software UCINET (Version 6.591 for Windows). The NetDraw (Version 2.155) was used to produce the visualization of these data.

Three figures (14, 15 and 16) depict two-node networks of concepts with colors (blue, red, and green) and the associated focus groups prompts (statement or questions) (black nodes).

Lines differed in thickness based on the number of times a specific focus group prompt was associated with the concept. Heavier lines indicate a higher frequency of linking.

Figure 14 depicts the relationships between concepts associated with the school atmosphere concept and focus group questions. Every concept was derived from responses prompted by at least two focus groups questions with an average of three prompts associated per concept.

Figure 15 depicts the relationships for power in the school. Similarly, every concept was based on responses from at least two questions. For this theme, concepts were more saturated. For this theme, on average, 4.14 prompts are used to saturate the theme.

Figure 16 depicts the links between concepts and prompts for the theme of bullying. On average, each of the three concepts was related to 2.67 prompts. This theme was the least saturated based on this single metric of frequency of prompts used.

Chapter 8 – Study Discussion

8.1 – Study Purpose

Prosocial and antisocial behaviors and their forms (e.g., helping and aggressing) have been conceptualized as opposite "types" of behaviors based on an underlying dimension or as independent dimensions (Eron & Huesmann, 1984; Goma-i-Freixanet, 1995; Krueger et al., 2001; Wispé, 1972). The inconsistencies in conceptualization and measurement of these behaviors across studies suggest differences between worldviews (as categorical or dimensional) and a misspecification of measurement level. Additionally, the social context of these interpersonal behaviors has been underexplored, despite recent recommendations from numerous researchers to explore relational factors as antecedents or moderators of helping (Clark, Boothby, Clark-Polner, & Reis, 2015; Dovidio, Piliavin, Schroeder, 2005) and bullying (Rodkin, Espelage, & Hanish, 2015). Finally, while the intersection of relative power and harming has been explored through the construct of bullying, it has not been studied in relation to helping behaviors.

This study addresses three primary aims: 1) to explore adolescents' salient examples of helping and aggressing as well as relevant power dimensions within a high school, 2) to test the theory of power-relevant helping and aggressing by analyzing the multi-dimensionality of interpersonal behaviors across gender and power types, and 3) to explore how students perceive interpersonal behaviors and power at school and the related emergent themes.

These aims were addressed through a mixed-methods study that included high school students' verbal remarks, using a focus group methodology for qualitative data and their written responses on surveys for quantitative data. Two mixed-gender focus group sessions were held with 13 and 11 adolescent students in grades 9 through 12; then, 203 students from the same high

school as the focus group participants rated the similarity of paired vignettes in order to explore the multi-dimensionality of interpersonal behaviors that benefit and harm others.

8.2 – Testing the Theory of Power-Relevant Helping and Aggressing

The mixed-methods design used qualitative focus group data to develop culturally relevant vignettes (Aims 1.1 and 1.2) in order to test the proposed theory of power-relevant helping and aggressing. The quantitative data supports a benefit-harm dimension (Aim 2.1). As hypothesized, quantitative evidence from the multidimensional scaling procedure suggests both helping and aggressing behaviors share an underlying benefit – harm dimension at the behavioral level. Regarding qualitative analyses, themes from the focus groups provide evidence that helping and harming behaviors intersect with numerous power-relevant concepts. Thus, both quantitative and qualitative analyses support the salience of a benefit-harm dimension in adolescents' understanding of interpersonal behavior. Neutral behaviors emerged on an independent dimension from no impact to impact, demonstrating that neutral behaviors have no impact and should not be conceptualized as the midpoint of an impact dimension from benefit to harm.

The quantitative data reject the proposition relating a relative power dimension to the proposed theory of helping and aggressing (Aim 2.2). Although relative power emerges as the last or fourth dimension for the model of interpersonal behaviors of girls for social power, it did not emerge for the other three sets of analyses. Furthermore, relative power did not emerge as a salient concept from students in the focus groups (Aim 3.1). In summary, this mixed-methods study supports a benefit – harm dimension, but suggests that relative power is not a salient dimension in adolescents' thinking about dyadic social behaviors.

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Clark, Boothby, Clark-Polner and Reis (2015) focus on six relational variables that may be more promising than relative power for understanding helping and harming behaviors in dyads: 1) relationship type, 2) relational character, 3) individual differences, 4) relationship history, 5) developmental stage, and 6) relationship networks. Relationship type and character emerge in statements about student interactions with police and teachers (town culture) and peers. Individual differences toward relationships are reflected in the 10 concepts (across three themes) related to positive (beneficial), negative (harmful) behaviors, neutral behaviors, and forms of bullying. Relationship history is evident in excerpts related to friendship closeness and relative power (interpreting power interactions). Developmental stage may be embedded within helping examples (e.g., showing students around the school that occurs between an existing student and new student). Relationship networks were evident in the four concepts most related to social affiliation, including town membership (town culture), sports teams and clubs (gaining power), class membership (interpreting power interactions) and academic status (effects of power). Although relational factors were evident, relative power was not. As a result, future research should focus more explicitly on the relational factors or explicitly address the limitations associated with the current study in order to increase the salience of relative power.

In the following sections, I examine the quantitative and qualitative findings in more detail. I then discuss the mixed-methods approach in this study, and expand on the gender differences that were found. I conclude by discussing strengths and limitations of this work and suggesting future research directions.

8.3 – Discussion of Quantitative Findings

The solutions for the four sets of analyses (crossing gender and power types) were three-dimensional for boys and four-dimensional for girls. However, benefit - harm, no impact -

impact, and collective dyadic power emerge as dimensions in all four analyses. Low to high

harm and relative power emerge for girls with academic and social power, respectively.

8.3.1 – Benefit – Harm Dimension

The benefit – harm dimension was based on the direction of the coordinates for all of the

beneficial and neutral behaviors, and it was the opposite direction for the coordinates of harmful

behaviors. Using the academic power of boys' interpersonal behavior as an example, every

benefitting and neutral behavior has negative coordinates in relation to the dimension, whereas

the harming behaviors has all positive coordinates. For interpersonal behaviors of boys, the

benefit – harm dimension reflects varying degrees of intensity, from extremely benefitting to

extremely harming. For girls, the extremely benefitting behaviors were not as strongly related in

this dimension as the moderately benefitting.

The emergence of a benefit – harm dimension provides evidence for a dimensional

approach and a bipolar conceptualization of these constructs and therefore the underlying

"opposite nature" of the constructs. These results build on the original conceptualization of

positive and negative social behaviors as opposites (Wispé, 1972), but suggest a dimensional

rather than categorical approach for labeling these behaviors. These findings, based on scaling

similarity ratings at the behavioral level, add critical evidence to the research debate about the

dimensionality of the following behaviors: prosocial – antisocial (Wispé, 1972), altruism –

aggressing (Krueger et al., 2001), prosocial – aggressing (Eron & Huesmann, 1984; Goma-i-

Freixanet, 1995), and prosocial – coercive (Hawley, 1999, 2003, 2011). Specifically, in these

studies, behavioral constructs are measured using frequency rather than intensity of behavior,

which results in the conceptualization of behavior as tendencies over time, at the person level of

measurement. Goma-i-Freixanet (1995) classifies risk taking activities "along a continuum

from prosociality to antisociality" (p. 125). Eron and Huesmann (1984) use longitudinal

correlational evidence of aggressing and prosocial indices to determine that these behaviors

"represent opposite ends of a single dimensions of behavior" (p. 201). Contradictory evidence of

the bipolar dimensionality regarding prosocial and antisocial behaviors (and forms) is provided

by Kruger et al. (2001) and Hawley (2011). Krueger et al., (2001) state that "analyses indicate

that altruism and antisocial behavior are independent tendencies with unique personality

correlates and distinct etiologies" (p. 401). Hawley (2011) states "prosocial and coercive

strategies can be measured on independent scales and then used to identify types of individuals

based on their employment of the strategies relative to other social group members" (p. 310). In

these studies, the level of measurement (at person level) limits researchers from answering the

research question regarding the underlying dimensionality of prosocial—antisocial (and their

forms). The use of MDS at the behavioral level (with a focus on intensity) allows for a bipolar

dimension of benefit—harm to emerge.

8.3.2 – No Impact to Impact Dimension

No impact – impact emerges as the second dimension for each of the four sets of

analyses. Across these analyses, the coordinates are most strongly related to the neutral

behaviors and the coordinates for the benefitting extremely and harming extremely behaviors

hold the opposite sign for their coordinates. Extreme forms of interpersonal behavior have more

impact than moderate forms. Neutral behaviors, by definition, do not benefit or harm the other

person in the dyad, which results in no impact.

In the proposed theory of power-relevant helping and aggressing, the benefit – harm and

no impact – impact dimensions were conceptualized as a single dimension of beneficial and

harmful impact, from extremely benefitting to extremely harming and neutral at the midpoint.

There was no prior literature to support the proposition that neutral behavior would be labeled as the midpoint of a benefit-harm impact dimension, but this was hypothesized based on parsimony. Interpretations from the MDS procedure suggest neutral behaviors are not the midpoint for the dimension, but are positioned on a no impact – impact dimension and represent a class of behavior with no impact. As a result, a novel theory on the broader class of interpersonal behaviors should include an impact – no impact dimension as evidenced by these data. However, for my theory of power-relevant helping and aggressing, neutral behaviors should be dropped and only impacting behaviors of benefit or harm should be included, because helping and aggressing are other-directed behaviors that impact others, which do not characterize neutral behaviors. Thus, a benefit-harm dimension of impact should remain in the theory of power-relevant helping and aggressing but should exclude a neutral midpoint of no impact.

8.3.3 – Collective Dyadic Power

The dimension for collective dyadic power emerges as the third dimension for three of the models and the fourth dimension for interpersonal behaviors of girls with academic power. In these models, behavior between high-power agent and high-power recipient were related to one end of the dimension, whereas low-power agent and low-power recipient were related at the opposite end.

The power of the dyad as a high or low power unit suggests two possibilities: 1) raters conceptualize power at the dyadic level or 2) raters view power at the individual-level with respect to the group, and as a result, they consider the power of both members in the dyad and then aggregate to the dyadic level. Based on prior research across multiple research literatures, I speculate why the collective dyadic power may serve as a proxy for power at the individual level with a group referent.

The conceptualization of power at different levels may be a proxy for group phenomena. At the level of behavior, Salmivalli (2010) contends bullying is a "group process," by noting the origin of bullying is mobbing, which occurs when "a group of children (are) ganging up on one and the same victim" (p. 113). At the individual level, De Bruyn and Cillessen (2006) developed "perceived popular" and "prosocial-popular" types of people based on the intersection of social behaviors and popularity, which is power at the individual level with a group referent. Additionally, status and power are multi-dimensional constructs. Likeability, popularity and dominance are dimensions relevant for seven prototypes of preadolescents: high status, average, unpopular, disliked, low status, well-liked/dominant, and perceived popular dominant (Lease, Musgrove & Axelrod, 2002). Categorical clusters of people, based on three dimensions, are then formed at the individual level with a group referent. The current study was limited by the use of a single salient dimension of power given the multi-dimensionality of power, but the emerging dimension of collective dyadic power provides additional support for the conceptualization of power as individual level with a group referent as explicated in the aforementioned studies.

In Social Dominance Theory, Sidanius and Pratto (2012) posit hierarchy is a group-based phenomenon, affected by age, gender and an arbitrary-set system (based on a selected differentiating factor for in-group and out-group status by the majority members). Older students, for example, are advantaged to younger students. As a result, age constitutes a form of power across nearly all levels of a system. Bronfenbrenner (1977, 1992) articulates five levels within the complex ecology that affect the individual: microsystem, mesosystem, exosystem, macrosystem, and chronosystem (Bronfenbrenner, 1977; 1992). Power residing at a single level of the ecological system is likely to have less impact than power transcending across multiple levels. This perspective guided the selection of academic and social power for vignettes, as

operationalized with honors status and family names, respectively. These power types were most salient and potentially influential across systems because focus group data allude to group-based power (e.g., honors vs. non-honors status, family affiliation in the town vs. affiliation with another town) and its effect throughout multiple ecological levels, which ultimately affects the individual.

8.3.4 – Degree of Harm and Relative Power Dimensions

The degree of harm (high to low harm) and relative power (from high-power agent to low-power agent) emerge in the models of girls' interactions for academic and social power, respectively. The degree of harm continuum may related to the theoretical continuum of violence proposed by Kelly (1987) to capture the perceived differential in aggressing intensity based on physical and psychological harm. This third dimension is similar to the first dimension of the model, which reflects the degree of benefit – harm. However, the emergence of this dimension suggests that girls perceive moderately harmful and extremely harmful behaviors in regard to academics as more dissimilar than moderately benefitting and extremely benefitting behaviors. This dimension was not seen for boys.

Adolescent girls outperform boys on classroom tests and perform slightly better on achievement tests but score worse on IQ tests (Duckworth & Seligman, 2006). Mediation analyses suggest hard work, as measured through the construct of self-discipline, explain the effects. It's possible harmful comments targeting academic performance may be interpreted differently for girls in comparison to boys due to differential work ethic and performance.

In this study, I hypothesized relative power would emerge as the second dimension across the four sets of analyses. However, relative power emerged only for girls' similarity ratings in regard to social power, and only as a fourth dimension. Cognitive development and dyadic-

focused relationships during adolescence for girls, in comparison to boys, may offer some explanation for these gender differences (Rose & Rudolph, 2006). These effects and interpretations will be discussed below in detail.

8.4 – Discussion of Qualitative Findings

The data from two focus group sessions reveals three themes: school atmosphere, power in the school, and bullying. Within the school atmosphere theme, six concepts were identified, including negative and positive interactions with others, receiving harmful and beneficial actions, gender differences, and town culture. Seven concepts emerged for power in the school: positive things people do with power, negative things people do with power, gaining power, behaviors of powerful people, personality traits of powerful people, effects of power, and interpreting power interactions. The bullying theme was present in three concepts: in-person, online/social media, and negativity in the school.

8.4.1 – Discussion of the School Atmosphere Theme

The concepts subsumed in the first theme of school atmosphere align with prior research related to school climate (Cohen, McCabe, Michelli, & Pickeral, 2009), which refers to the norms, goals, values, relationships, practices, and structure of a school. The first four concepts reflect social behaviors that benefit or harm others from the perspective of the agent and observer or recipient. The connotative definition for these behaviors, as indexed by student remarks and coder interpretations, map on to the denotative definitions for helping and aggressing. The coders differentiated between agent and recipient in order to form two concepts: "interactions with others," and "receiving actions." The emergence of these concepts is not surprising given the first two focus group questions solicited examples of behaviors that benefit or harm others.

Excerpts supporting these concepts include social behaviors involving multiple parties that occur beyond the dyadic context.

The emergence of a Town Culture concept is noteworthy. The lead author with consultation from the dissertation chairperson selected this school site for study participation due to social hierarchy dynamics that were speculated to emerge from the merger of two high schools. The study site was a school from within the town limits whereas the closing school was from a neighboring town. This concept demonstrates a dimension of power and influences social interactions among peers at school. Consistent with Bronfenbrenner's ecological systems theory (1977, 1992), student interactions with teachers, police officers, and peers (microsystem) are likely affected by parents' engagement with the school and relationships with school personnel (mesosystem), the norms and practices of the local police (exosystem), and the cultural values and expectations of town members (macrosystem).

8.4.2 – Discussion of the Power in the School Theme

The second theme of power in the school focuses on the sources of power (i.e., gaining power and personality traits of powerful people), the behaviors (i.e., positive and negative things people do with power), and the consequences of power (i.e., effects of power and interpreting power interactions). These concepts map onto existing concepts within the power-related literatures, such as the bases of power (Raven, 1959) and characteristics of bullies (e.g., Lowenstein, 1977).

The positive things people do with power theme reflect forms of prosocial behavior. In fact, the excerpts show four prosocial behavior types also identified by Bergin et al. (2003) through adolescent focus groups. These types are complimenting and encouraging others, helping others develop a skill, providing physical assistance, and standing up for others.

Gaining power was related to aggressing against peers as well as social affiliation with a peer group or an athletic team or club. The emergence of these concepts suggests power resides at the individual level with a group referent or at the group level (e.g., football team has more power than the volleyball team). Aggressing, not helping, are actions discussed as a way of gaining power, which is also noteworthy.

Most interesting within this theme was the concept of interpreting power interactions. Excerpts appear to relate to relational concepts, such as closeness and relative power. For helping behaviors, motivation to help differs based on whether the recipient has a close relationship or not to the agent (Manner & Gailliot, 2006). Because the amount of victimization for female adolescents is negatively correlated with the number of close friendships (Paquette & Underwood, 1999), one might speculate that experiencing victimization from a close friend may be perceived differently than victimization from an acquaintance or stranger.

8.4.3 – Discussion of the Bullying Theme

The intersection of harm and relative power is noted through the construct of bullying, which emerges as the third theme. The excerpts supporting the in-person concept involve three or more people (aggressor, victim, observer). Also, the verbal statements provided are rumors. In all of the excerpts related to online/social media, anonymity is emphasized. The third concept, negativity in the school, was a catch-all concept for harmful actions and school climate issues that did not fit in prior concepts.

For the bullying theme, all of the excerpts shared a component of the bullying definition of "intent to harm." This is consistent with prior research, which finds harm as the primary dimension perceived by aggressors and victims when defining bullying (Cuadrodo-Gordillo, 2012). The relative power component of bullying did not emerge as a theme or concept from the

excerpts. It is noteworthy that only a third of high school students include "power imbalance" when defining bullying (Vaillancourt et al., 2008). Therefore, researchers' conceptualization of bullying (e.g., Olweus, 1994; Volk et al., 2014) may differ from that of students, emphasizing the importance of exploring social phenomena at school from the perspective of students.

In summary, 16 concepts supported the emergence of the three themes. It remains unknown whether these concepts and themes are saturated, which is a key tenet of grounded theory. Only two focus groups with six focal questions were used to catalyze the data. Figures 14 and 15 suggest the first two themes and concepts may be more fundamental than the bullying theme (see Figure 16), which derived concepts from excerpts from fewer related prompts.

8.5 – Discussion of Mixed-Methods Study

As suggested by Johnson and Onwuegbuzie (2004), mixed-methods research is a "research paradigm whose time has come" (p. 14). In order to explore psychological phenomena fully and precisely, research questions may be answered using quantitative data and qualitative data, along with quantitative and qualitative analyses. For this study, a mixed-methods design was used for development (i.e., qualitative data informs vignettes for quantitative phase) and expansion (i.e., benefit-harm and relative power were more effectively explored). An expansion approach recognizes that limitations of one method may be offset by another. The quantitative approach was able to answer specific questions related to the dimensionality of interpersonal behavior using a derived etic approach, whereas the qualitative phase was able to explore power-related concepts from the perspective of students using an emic approach (Berry, 1969). Across phases, benefit and harm in helping and aggressing behaviors were explored in-depth as they intersect with power in a peer dyadic context at school.

8.5.1 – Benefit - Harm in Helping and Aggressing

The benefit – harm dimension emerges in all four sets of analyses in the quantitative phase (Aims 2.1, 2.3, and 2.4). This consistency across gender and power types is indicative of a salient and underlying dimension for interpersonal behaviors. In the qualitative phase, research assistants using a categorical approach (rather than dimensional) ascribed meaning to excerpts and labeled them into mutually exclusive groups.

In Figure 3, I observe concepts with excerpts referencing behaviors that benefit or harm others for 10 of the 16 concepts. Although not explicitly noted by the coders, I note that concepts were differentiated based on helping and aggressing: "positive interactions with others" and "negative interactions with others"; "receiving beneficial actions" and "receiving harmful actions"; "positive things people do with power" and "negative things people do with power." Furthermore, it is noteworthy that the coders split helping and aggressing based on the perspective of the dyad member (agent vs. recipient; e.g., positive interactions with others vs. receiving beneficial actions). Aggressing only (red) was evident in six concepts across the themes, whereas helping only was evident in three concepts. Three concepts include references to excerpts with aggressing and helping (purple) and three concepts have no references to these behaviors (green). In conclusion, benefit and harm are emergent from both phases of the mixed-methods design.

8.5.2 – Relative Power in Helping and Aggressing

Across phases, relative power does not emerge as a salient dimension (Aim 2.2) or concept related to adolescent thinking about aggressing or helping (Aim 3.1). However, collective dyadic power does emerge across the four sets of analyses, suggesting power is relevant for interpersonal behavior. The coordinates for high-power agent and high-power

recipient are in a similar direction across the benefit – harm dimension for the four sets of analyses, suggesting collective dyadic power may not be biased toward a specific interpersonal behavior, such as helping or harming. If for an example, high-high power interactions emerged with harming interactions only, and then power might be biased toward aggressing behavior. The absence of this bias provides support for a power-relevant dimension, but not relative power, in relation to aggressing and helping.

Aim 3.1 focuses on whether relative power was a salient concept in relation to aggressing and helping behaviors. The final master list of themes, concepts, and excerpts, based on the coding of four undergraduate students, did not provide support for the relative power dimension for my theory of power-relevant helping and aggressing. Power was discussed at all levels, including behavioral (i.e., positive and negative things people do with power, behaviors of powerful people), individual (e.g., personality traits of powerful people), group (i.e., references to group-based social hierarchy among athletic teams and club) and social class (i.e., family names referenced in Town Culture). However, there was no emerging concept or dimension of relative power in the themes or concepts.

The theoretical relative power dimension for defining behavior is the impetus for naming forms of interpersonal behaviors, from lower to higher-power helping and lower to higher-power aggressing. Higher-power aggressing (as defined by my theory) or bullying (as defined by researchers and research assistants) emerged as a theme from the data. I now speculate on why the parallel beneficial forms of interpersonal behavior (e.g., higher-power helping) did not emerge from the data. In the English language, there is not a word for higher-power helping. Thus, it may not be readily identifiable by coders because it is not currently included in their own nomological network. Similarly, the concept may not exist within the high school students who

provided responses to social interactions and power-related questions in the focus groups. It is also quite possible that no such term exists in the English language because the concept does not exist in our current social reality.

It is noteworthy that concepts with helping were half as likely to emerge as concepts with aggressing despite questions related to harming being asked equally as often as benefiting-related questions in the focus groups. Although power is theoretically neutral, these data suggest power is not truly a neutral term, but rather has negative associations for high school and undergraduate students involved in the focus groups and coding, respectively. In summary, findings suggest that: 1) relative power is not a meaningful concept for high students, 2) interpersonal behaviors are nested within a relational context, and 3) power intersects with helping and aggressing.

8.5.3 – Gender Differences

In the quantitative phase, a three-dimensional solution emerged for boys' perceptions of interpersonal behaviors in comparison to a four-dimensional model for girls. The existence of additional interpretable dimensions for girls may relate to the self-awareness, theory of mind, and social attribution skills related to advanced cognitive development during adolescence (Blakemore & Choudhury, 2006). Girls' perceptions of a degree of harm dimension might relate to prior literature, which has demonstrated that girls report higher feelings of distress due to victimization compared with boys and stronger attributions relating their victimization experiences to their self-concepts (Paquette & Underwood, 1999). During adolescence, girls are more likely to have dyadic friendships and consider relationships central to their self-descriptions (Rose & Rudolph, 2006). Additionally, the broader relational social network of girls, which occurs across multiple dyads and includes groups, may influence a single dyadic relationship.

Girls self-report more friendship jealousy compared to boys (Parker, Low, Walker & Gamm, 2005), which may relate to perceptions of power asymmetry within groups and between dyad members.

A benefit – harm dimension emerges across genders (Aims 2.1 and 2.3), but the coordinates of benefitting behaviors differ for girls in comparison to boys; girls are less likely to differentiate between extreme and moderate forms of benefitting behavior. These results may relate to findings showing that women, compared to men, are more likely to hold a communal goal orientation, which relates to prosocial behavior (Diekman & Clark, 2015). Additionally, adolescent girls report receiving higher rates of prosocial behavior than do boys (Paquette & Underwood, 1999). Thus, girls may perceive benefitting behavior as more normative than do boys, both because they may hold stronger communal goals and experience more prosocial behavior. If prosocial behavior is more of an expected response, there may be less differentiation between moderate and extreme forms of benefitting behavior.

In the qualitative phase, every prompting focal question included a follow-up question to explore gender differences: "Is it different for boys and girls?" The emergence of gender differences is therefore consistent with my conceptualization and with prior research regarding gender differences for girls and boys. Qualitative analyses suggest that the concept of receiving harmful actions was perceived differently by boys and girls. Girls' perceptions of negative comments as hurtful and thoughtless by the agent differ from boys who discuss the value of not taking harmful actions to heart. These remarks are consistent with the findings in the quantitative phase regarding girls' perceptions of a degree of harm dimension for interactions related to academic power, a dimension that did not occur for boys. Together, these findings provide additional evidence that girls perceive greater differentiation of harmful actions than

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boys. Because benefitting and harmful behaviors form a dimension, if girls perceive benefitting actions as more normative than do boys, their lesser differentiation in benefitting actions and greater differentiation of harmful actions may be related to this gendered norm. Future research should explore the intersection of role (as agent, recipient or bystander) and gender in order to better understand how gender norms affect these experiences related to interpersonal behavior.

8.6 – Study Limitations, Strengths and Future Directions

I next discuss the limitations, strengths, and contributions of this research study to social, developmental and educational research literatures. The mixed-methods study, derived etic approach, and novelty of the theory are critical strengths of the proposed study. The study is also limited in specific ways, including focus groups size and composition, saturation of the concepts, as well as the use of paper-and-pencil tests for vignettes in lieu of a visual or movie clip of interpersonal actions.

8.6.1 – Study Limitations

Given the aims of this proposed study, a mixed-methods approach with focus group sessions and a self-report survey was appropriate.   Limitations include the number of focus groups (i.e., two sessions of 24 total student participants) and their composition (i.e., skewed toward upperclassmen and girls). A more generalizable sample (targeted schools across geographic regions, varying student compositions based on racial and ethnic differences and urban/ suburban settings) would improve the external validity of these findings.

Power is a multi-dimensional construct, yet only one dimension was highlighted in the relational context of the vignette. Also, the use of power type (e.g., honors versus non-honors for academic status) varies relative power categorically (as high or low) rather than dimensionally (much higher power, somewhat higher power, etc.) for vignette construction,

which is contrary to my proposed theory. For practicality, this limitation will need to be addressed in a future study.

The introduction focuses on the importance of school and relational context. Although the most relevant types of power were used based on the school context, the quantitative phase of the current study uses two names (of boys or girls) in the vignettes, which have no relational context for the rater. As a result, interpreting power dynamics from a single moment in time may be difficult. As noted previously, Clark, Boothby, Clark-Polner and Reis (2015) suggest relational character and history are important relational factors influencing prosocial behavior. In fact, repetitive behavior between dyad members is often included as a component of bullying, even though it was not explored in this study. Repetitious behavior across time implies some relational history between dyad members. The aim was to explore interpersonal behavior at the behavioral level. As a result, the chronosystem was not fully captured in these vignettes, especially with regard to the dyadic relationship (Bronfenbrenner, 1977; 1992).

In order to explore the impact dimension and two types of power, 40 vignettes were created. As a result, student ratings were aggregated to the group level and analyses were conducted. As shown in Tables 7 and 8, the standard deviation of ratings was fairly high for a 7-point rating scale and thus, potentially meaningful systematic variance due to individual differences and error variance was ignored when aggregating to the group level.

Ratings and statements were made by students with an "observer" role rather than the role of agent or recipient of the action. Howowitz et al. (2006) refer to agency and communion as an agent's primary motives for an interpersonal action. They note that the same behavior could be perceived as motivated by an agency or communion goal. For example, bullies self-report a desire for dominance and status consistent with the proposed agency dimension (Olthof,

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Goossens, Vermande, Aleva, & van der Meulen, 2011; Sijtsema, Veenstra, Lindenberg, & Salmivalli, 2009). Perceptions of relative power may be less salient for observers or recipients of an interaction, but more salient for a higher or lower-power agent, especially when motivated by an agency goal. As a result, future research must make the agency goal of the agent more salient in addition to the communion dimension (benefit-harm), which in turn, may increase the salience of relative power.

8.6.2 – Strengths

The study has three primary strengths: 1) a conceptual focus on multi-level, multi-referent constructs, 2) strong methodological choices to use emic and derived etic approaches through a mixed-methods design, and 3) the use of a robust analytical approach through multidimensional scaling. As a result, the study contributes to the scientific literature regarding the conceptualization and measurement of prosocial – antisocial behavior and helping – aggressing behavior during adolescence.

This study focuses on the structure of a single interpersonal behavior rather than tendencies over time in order to address this critical research question. Hawley (2003) has emphasized the similar function of prosocial and aggressive strategies for achieving resource control. This study focuses on the similarity of these interpersonal behaviors by using a bipolar dimension to connect these different "subtypes" of behavior.

Until this study, prior research had not addressed the research question of whether or not relative power is salient in adolescent thinking about helping behaviors. The study benefits from exploring relative power via the lens of students in two focus groups and through anonymous responses to surveys. Focus group commentary allows for the identification of the most salient culturally-relevant dimensions of power. Honors status and family names emerge and relate to a

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student's means and discretion to carry out goals, which reflects two components of a definition for power (Sturm & Antonakis, 2015). Therefore, these power constructs met the criteria of both researchers (definition of power) and students (culturally-relevant forms). In order to explore inductively, research assistants were blind to the study aims and thus were able to use open coding to derive themes and concepts from the student transcripts.

The use of MDS allows for an exploration of intensity rather than frequency of behavior. Such an operation has implications given research demonstrating a weak correlation between frequency and severity of bullying as well as differential prediction of these constructs (Chen, Cheng, Wang, & Hsueh, 2014; van Noorden, Bukowski, Haselager, Lansu, & Cillessen, 2016). This operationalization, based on intensity, was a key feature of the study and allows for improved measurement of these constructs.

This study contributes to the psychological research literature in many ways. First, I tested a theory to support and refute prior findings related to the long-standing debate about the conceptualization and measurement of prosocial and antisocial behavior through helping and aggressing behaviors. Second, a derived etic approach was used to understand behaviors from adolescents' perceptions, which builds on prior research demonstrating researchers' perceptions of behavior (e.g., bullying; Vaillancourt et al., 2008) may be consistent or even differ from students' conceptualizations. Thirdly, I emphasized the *relational context* for both conceptualization as well as measurement of aggressing and helping behaviors (in a dyadic relationship), which builds on the recommendations from researchers exploring prosociality (Clark, Boothby, Clark-Polner, & Reis, 2015; Dovidio, Piliavin, Schroeder, 2005) and scholars studying bullying (Rodkin, Espelage, & Hanish, 2015).

8.6.3 – Future Directions

Future directions for basic research should include follow-up studies using multidimensional scaling with different behavioral forms and relational dimensions. In this study, the benefit- harm dimension replicates across gender and two power types, but future research should replicate MDS findings by testing this theory with additional behavioral subtypes (e.g., physical, overt) and power dimensions (e.g., popularity). If physical aggressing and physical helping share an underlying continuum, my theory would gain additional support; if not, this would demonstrate an important boundary for my theory. If other dimensions of power or multiple power dimensions were aggregated to form a singular power composite then the theory would have more support.

In order to confirm the dimensions in a follow-up study, students could rate the dimensions for interpersonal behaviors in lieu of similarity ratings. Ratings to inform the revised theory of power-relevant helping and aggressing would rate these behaviors using two dimensions: impact (from benefit to harm) and collective power of the dyad (from low to high). For the broader construct of interpersonal behavior (which includes neutral behaviors), ratings would occur for the three emerging dimensions from the study: benefit – harm (from extremely benefitting to extremely harming), impact (from no impact to extreme impact), and collective dyadic power (from low-low to high-high). Regression analyses could be used in order to confirm the dimensions emerging from this study. Follow-up research should explore other power-relevant constructs. For example, rather than rate the collective dyadic power, the individual power of the agent and perceived impact of his/her behavior could be useful.

Furthermore, future studies might specify explicit criteria for making the similarity judgments. For example, respondents may rate the similarity of these behaviors in terms of

function (getting what you want). By focusing on function, the proactive aggressing and proactive helping literatures could be bridged. Building on the correlational findings between proactive prosocial behavior and proactive aggressing (Boxer, Tisak, & Goldstein, 2004), MDS would confirm the similarity between proactive helping and proactive aggressing based on a similar goal pursuit.

Because relative power did not emerge as a salient dimension, I suggest three primary tracks for follow-up research that highlight the relational context. First, relative power could be explored under different relational conditions that increase its salience. Second, relative power could be replaced as a focal concept in order to explore other relational factors with significant influence on interpersonal actions that benefit or harm. Third, power could be conceptualized as an individual-level construct with a group referent. In this case, group hierarchy and social status may be salient dimensions.

In fact, key aspects of relationships, such as relational history and dyadic norms were unknown to the raters in this study and thus, limited findings. As a result, the social context embedded in the vignettes should be altered to include repetition of prior behavior, individual characteristics of dyad members, group membership identification, relational history and friendship.

Exploring different factors related to the relational context of dyads as emphasized by aggression-focused researchers (e.g., Rodkin, Espelage, Hanish, 2015) and prosocial-focused researchers (e.g., Clark, Boothby, Clark-Polner, & Reis, 2015) is critical, especially given the importance of close peer relationships during adolescence (Collins & Laursen, 2004). The inclusion and measurement of other emotion-relevant and contextual factors may be fruitful areas for future directions. Reviews of research have shown how sending, receiving and

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experiencing emotion-related messages in social interactions during adolescence (Booker & Dunsmore, 2016) relates to internalizing and externalizing symptoms, and ultimately social competence (Miller-Slough & Dunsmore, 2016). Therefore, dimensions related to emotional intimacy, social support, intensity of shared emotions, and perceptions of relational closeness between dyad members may be more salient and relevant dimensions than relative power.

Relative power may have served as a proxy for a group-based power differential. Social identity theory suggests group-level identification alters individual self-perceptions and interpersonal behavior in reference to the dyad and group (Tajfel & Turner, 1986). According to Nadler (2002), "the willingness to seek, receive, and give help will be affected by group affiliation of members only when group identities are salient" (p. 491). To support his conceptual model of inter-group helping, he gathers empirical evidence demonstrating differential helping; individuals are more likely to help in-group rather than out-group members. As a result, future research should explicitly test relative power between dyad members of the same group in order to make within-group, rather than between-group differences, more salient.

Intervention and practice may benefit from these findings. Specifically, Positive Behavioral Interventions and Supports (PBIS) use differential reinforcement of an incompatible behavior as a procedure for replacing aggressing with prosocial actions among youth in schools. The emergence of a benefit – harm dimension suggests a verbal remark that harms a person is incompatible with a verbal remark that benefits a person. The *Meaningful Roles* intervention selects bullies and provides them with opportunities to perform prosocial tasks for other students in the classroom (Ellis, Volk, Gonzalez, & Embry, 2015). The emergence of a collective dyadic power dimension across the benefit and harm dimension may suggest power resides at the individual level and helping should be promoted in lieu of aggressing. In addition to targeted

intervention for individuals based on power, these data may suggest the importance of group-based intervention in order to reduce between-group rather than between-person differences.

Follow-up work should focus on developing a psychometrically-valid instrument in order to measure the multi-dimensional nature of these behaviors at a single point in time or over time, based on intensity of impact. Assessing behavioral tendencies for a particular student based on intensity of benefit or harm could be advantageous because two operations of behavior (frequency and intensity) could be visually displayed using a two or three-dimensional map. In connection to the *Meaningful Roles* intervention, students could be selected for this intervention based on two dimensions, high power and extremely harmful interactions, in order to increase their display of helping from their high power status. Assessment of behavioral intensity, within forms of behavior, should be considered for future program development and evaluation.

Practically, school personnel and youth could self-report their own interpersonal behavior or that of their peers in relation to the first dimension of the theory of power-relevant aggressing and helping. At times, the perception of the agent, recipient, and peer observers may differ markedly. Differential perceptions may relate to power-related constructs (individual power, group-based hierarchy, and social status at school) or dyadic relational constructs (relational closeness or the history of relationship). Aggregating by groups or teams might provide some insight about group norms for behavior. Additionally, student to student or student—adult discussions (with a teacher, school worker, school counselor, school psychologist, school resource officer) of relational and power-related factors may be fruitful for understanding the context of these behaviors. Finally, understanding the differential perceptions in motives for the agent as agentic versus communion may be important.

8.7 – Conclusion

      This dissertation included three sets of aims. The first aims were to explore salient examples of helping and aggressing (Aim 1.1) and power in the specific cultural context of a rural, Ohio school (Aim 1.2). These aims were supported using a sequential mixed-methods design with a development focus on vignette construction. The second aims were to test the dimensionality of interpersonal behavior using the theory of power-relevant helping and aggressing based on an intensity dimension of benefit – harm (Aim 2.1) and relative power dimension (Aim 2.2). A benefit – harm dimension emerges across four sets of analyses for boys and girls in regard to academic and social power (Aims 2.1, 2.3 and 2.4). A relative power dimension emerges as the fourth dimension for girls with social power, but not for the other three sets of analyses (Aims 2.2, 2.3 and 2.4), suggesting relative power is not salient in adolescent thinking about dyadic verbal interactions. The third set of aims was achieved through inductive analysis using a grounded theory approach. Relative power did not emerge (Aim 3.1) among the three themes and 16 supporting concepts (Aim 3.2). These results provide evidence for an underlying benefit-harm dimension, resulting in helping and aggressing as dimensional opposites. The consistent emergence of a collective dyadic power dimension suggests power resides at the individual level power with a group referent. Future research should expand the theory of power-relevant helping and aggressing in relation to other power-related constructs and explore the multi-dimensionality of helping and aggressing in relation to other dyadic relational factors.

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