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Theoretical Perspectives on Sibling Relationships

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Abstract

Although siblings are a fixture of family life, research on sibling relationships lags behind that on other family relationships. To stimulate interest in sibling research and to serve as a guide for future investigations by family scholars, we review four theoretical psychologically oriented perspectives—(a) psychoanalytic-evolutionary, (b) social psychological, (c) social learning, and (d) family-ecological systems—that can inform research on sibling relationships, including perspectives on the nature and influences on developmental, individual, and group differences in sibling relationships. Given that most research on siblings has focused on childhood and adolescence, our review highlights these developmental periods, but we also incorporate the limited research on adult sibling relationships, including in formulating suggestions for future research on this fundamental family relationship.

Keywords

adults; children; sibling relationships; sibling studies

Despite the fact that most individuals in the United States grow up with at least one sibling and the fact that sibling relationships are often the longest-lasting relationship in individuals' lives (Cicirelli, 1995; Hernandez, 1997; U.S. Bureau of the Census, 2005), research on sibling relationships lags behind that on other family relationships. An accumulating body of work, however, documents that siblings are central in the lives of individuals and families around the world and across the life span: Siblings serve as companions, confidants, and role models in childhood and adolescence (e.g., Dunn, 2007) and as sources of support throughout adulthood (e.g., Connidis & Campbell, 1995). To date, much of the empirical work on sibling relationships focuses on their role in *individual* psychological development and behavioral adjustment. In this article, we move away from a focus on the individual to review theoretical perspectives that (a) identify the central dimensions of sibling relationships, such as rivalry and support; (b) account for changes in the characteristics of those relationships over the life span; and (c) explain variations in sibling dynamics between families, for example, as a function of family socialization processes and variations across groups, including those defined by gender and by ethnicity or culture. Our goals in this review are to stimulate interest by family scholars in studying sibling relationships as fundamental to family systems and to provide a theoretical grounding for future research.

In the following pages, we provide an overview of four key psychologically oriented perspectives that have been applied in describing and explaining variations in sibling relationships: (a) psychoanalytic-evolutionary, (b) social psychological, (c) social learning, and (d) family-ecological systems perspectives. Given that the majority of research on

sibling relationships has focused on childhood and adolescence, we chose perspectives that have been primarily applied to these developmental periods. Throughout the review, we discuss how each has been applied to research on sibling relationships to date, with specific attention to the developmental period examined, and we suggest how each may guide future research, including by informing studies of adult sibling ties. Given the limited literature on adult siblings and space constraints, however, we have not extended our review to describe in detail frameworks such as life-course (e.g., Elder, 1996) and feminist perspectives (e.g., Walker, Allen, & Connidis, 2005) that have been applied in research on sibling relationships in adulthood. Throughout our review, we strive to highlight commonalities as well as distinctions among perspectives and to illustrate how they may be applied in complementary ways to advance understanding of this important family tie.

Psychoanalytic-Evolutionary Perspectives

Two theories that have been used to explain sibling relationship dynamics, Bowlby's (1969) attachment theory and Adler's theory of individual psychology (see Ansbacher & Ansbacher, 1956), are grounded in writings from the first half of the 1900s within the field of psychoanalysis. Importantly, ideas from ethological theory being advanced at that time (e.g., Tinbergen, 1951) permeated the thinking of early writers, particularly the focus on instinctual or species-typical patterns of behavior inherent in attachment theory and attention to the adaptive value or survival function of social behavior inherent in both perspectives. As we elaborate, after something of a hiatus, during the past decade, there has been renewed attention by evolutionary psychologists on the adaptive value of sibling relationship dynamics.

Attachment theory

Grounded in the early writings of John Bowlby (e.g., Bowlby, 1969), attachment theory purports to explain developmental changes, but primarily individual differences, in social relationships. This perspective targets the early bond between infants and their primary caregivers as critical to the infants' survival. By virtue of their characteristics and behaviors (e.g., crying, clinging), infants promote proximity to their caregivers, beginning in the first days of life. Across the first year of life in humans, an attachment relationship forms, and this relationship varies in its degree of security depending on the sensitivity and responsiveness of the infant's caregiver. As children develop, in the second year, the attachment figure can become a secure base from which children explore the world around them but return to in stressful circumstances for comfort and a sense of security. Separation or loss of an attachment figure, in contrast, gives rise to anxiety and distress. From this theoretical perspective, the nature of the relationship with a primary attachment figure, most often the mother, becomes the basis for an internal working model of relationships, that is, individuals' expectations, understanding, emotions, and behaviors surrounding their interpersonal relationships as a whole. From this perspective, children's relationships with a primary caregiver have long-term implications for the qualities of their sibling relationships: Emotionally secure caregiver–child relationships are thought to lead to close and trusting relationships with others, whereas insecure relationships may lead to conflictual, distant, or otherwise less satisfying relationships, including with siblings.

Equally important from an attachment perspective is that, in addition to their primary caregiver, children can form attachments to a range of familiar others in their social worlds. And given their ubiquity in everyday life during childhood and adolescence, siblings are prime candidates for attachment relationships. Early in life, the need for a sense of security means that attachment relationships are based on others' responsiveness to infants' needs, and thus sensitive and involved older siblings may become objects of attachment. Importantly, from an attachment perspective, attachment is not equivalent to relationship

positivity but implies a deeper bond that varies in the extent to which a relationship partner serves as a source of emotional security. Thus, in the face of harmonious interactions, siblings may not necessarily exhibit attachment relationships. For example, some young children may use their sisters and brothers as a secure base from which to explore or as a source of comfort in stressful circumstances, but others may not (e.g., Samuels, 1980). Consistent with the potential of siblings to serve as attachment objects, Jenkins (1992) found that some siblings turn to each other for emotional support in the face of parents' marital conflict. Although not rooted in attachment frameworks, Jenkins's (1992) study and other work (e.g., Kim, McHale, Osgood, & Crouter, 2006; Voorpostel & Blieszner, 2008) yield evidence of the role of siblings as sources of emotional security at different points across the life span. Understanding the factors that explain why siblings form attachment relationships remains an important direction for future research.

Also of importance to sibling relationships is the idea that, with maturity, individuals increasingly form mutual and reciprocal relationships, wherein each partner's responsiveness to the needs of the other becomes important. In this way, siblings' behaviors toward each other may exert an influence on the sibling relationship, with each sibling's working model influencing the creation of an attachment relationship between them. As we and others have described (e.g., Dunn, 2007; East, 2009; McHale, Kim, & Whiteman, 2006), sibling relationships are unique in that they are characterized by both hierarchical and reciprocal elements, which change across place and time. Whether and how attachment relationships between siblings form and develop are important issues for attachment theory and for sibling relationship researchers, but, as we review here, research on attachment relationships between siblings is limited.

Most of the empirical work on siblings within an attachment paradigm has compared parent–child attachment bonds across sibling pairs, and most studies have found only moderate rates of concordance (between 40% and 70%) between parents' attachment classifications with multiple offspring (e.g., Caspers, Yucuis, Troutman, Arndt, & Langbehn, 2007; O'Connor & Croft, 2001; Rosen & Burke, 1999; van Ijzendoorn et al., 2000). Importantly, research suggests that there are group differences in concordance, with higher rates found among same-gender pairs (van Ijzendoorn et al., 2000). Although attachment research generally has revealed few differences between the classifications of boys and girls (Benenson, 1996), objective differences between children in the same family may result in differences in parents' rearing strategies and interaction styles, such as with sons versus daughters. Within-family designs—comparing two or more children from the same family—are necessary to test such a possibility. In this way, studies of siblings can inform the broader literature on family relationships.

Consistent with the notion that parent–child attachment relationships serve as internal working models for children's interactions with siblings, longitudinal research across infancy and early childhood has suggested that infants who are insecurely attached to their mothers show higher rates of sibling conflict and hostility in the preschool years (Volling, 2001; Volling & Belsky, 1992). Similarly, Teti and Ablard (1989) found that two siblings who were both securely attached to their mother were more likely to form a positive relationship together than were dyads in which both siblings were insecurely attached to their mother.

In some cases, older siblings may take on the role of an attachment figure or a secure base for younger siblings. For example, a sibling attachment bond may be evidenced by an older sibling who facilitates exploration (Samuels, 1980) or provides comfort during a distressing situation when the primary caregiver is unavailable (Stewart, 1983; Teti & Ablard, 1989). Child gender may also play a role in sibling attachment bonds: Stewart (1983) found that

older siblings were more likely to serve as sources of comfort in mixed dyads as opposed to same-gender dyads. As we elaborate later, siblings in same-gender dyads may be more sensitive to issues of rivalry and competition, and as a result, they may not respond as readily to the needs of their sisters and brothers. However, given that most studies examining siblings' attachment patterns to date have relied on small samples, it is also important that findings be replicated.

The literature on sibling attachment in adolescents and adults is sparse. One study examining attachment relationships from early to late adolescence found a nonlinear change trajectory, with a sharp increase in the sibling attachment bond around the time when younger siblings joined their older siblings in secondary school (about age 12 in a Dutch sample), perhaps because of their newly shared environment and experiences (Buist, Dekovic, Meeus, & van Aken, 2002). An increasing focus on peerlike relationships in adolescence, shared social experiences, and increasing capacity for intimacy may be factors in this pattern of change, which clearly deserves more research attention. Other work has suggested that characteristics of siblings and of the dyad, including shared experiences and empathy, may undergird attachment relationships between siblings, and some of the few studies of multiple-birth siblings (i.e., twins) show that relationships between adult twins are most likely to involve attachment features (Neyer, 2002; Tancredy & Fraley, 2006).

In early adulthood, empirical work has suggested a distancing in the sibling relationship, with decreases in contact and proximity (e.g., White, 2001). Given the number of life changes that occur during this period (e.g., transitioning out of the parental home, leaving formal education, entering the workforce, entering long-term romantic relationships, parenthood), this distancing is not surprising. In fact, during this period, it seems that siblings focus on their families of procreation, as opposed to their families of origin, as transitions such as marriage and parenthood are negatively linked to sibling contact and exchange (White, 2001). Rather than reflecting a breach in the sibling relationship, the transition to adulthood may reflect a period of transformation during which relationships and the attachment behaviors that constitute them change. For example, in adulthood, attachment bonds may be reflected by siblings who seek contact (e.g., telephone, e-mail), pay each other occasional visits, and derive a sense of satisfaction and well-being from the relationship (Cicirelli, 1995). Consistent with this notion, in middle and later adulthood, contact between siblings stabilizes (White, 2001) and most siblings maintain contact with one another throughout the life course (Cicirelli, 1995). In fact, studying a nationally representative sample of 7,730 adult siblings, White and Riedmann (1992) found that more than half of all brothers and sisters contacted one another at least once a month. Moreover, because computer-mediated communications such as e-mail, blogs, and Facebook have made it easier for individuals and family members to stay connected and because older adults are using these technologies at greater rates than in the past (Pew Internet and American Life Project, 2010), it is likely that adult siblings are more involved and informed than in recent memory. And, although personal and situational factors come into play, most adult siblings report feeling close to one another (Cicirelli, 1995; White, 2001; White & Riedmann, 1992). Finally, further reinforcing the significance of an attachment bond, siblings are also common sources of social support and assistance in adulthood, especially in older adulthood (Cicirelli, 1995).

In short, research suggests that an attachment perspective may provide a solid foundation for research on sibling relationships across the life span. In childhood, attachment bonds between siblings may resemble and complement parent–child bonds, but they may also compensate for parental inadequacies in cases of stress or deprivation. The attachment relationship between siblings also develops over time. As mentioned earlier, both hierarchical and reciprocal elements that change over time characterize sibling relationships.

As siblings transition from adolescence into adulthood, their relationship becomes more voluntary and peerlike; correspondingly, attachment behaviors also change. A body of work by Cicirelli (1992, 1995), for example, highlights that qualities such as contact, help and support, and feelings of closeness and security are markers of sibling attachment in adulthood, and those behaviors are in turn related to linked psychological and physical health in old age. Yet not all close relationships are attachment relationships, and it is important for researchers to identify predictors and correlates of siblings' attachment bonds. Importantly, research on the sibling relationship, the only lifelong relationship in most individuals' lives, also could serve as a forum for testing life-span tenets of attachment theory.

Adler's theory of individual psychology

Alfred Adler was a part of the psychoanalytic movement of the early 1900s that focused on the causes of personality. Although originally a central figure in the Freudian school, Adler took issue with Freud's focus on the libido—an internal source of motivation for behavior and development—and instead highlighted the important role of external social influences on personality development. Specifically, Adler targeted the role of the family system, including sibling influences, as central in personality. A key construct in Adler's theory was the inferiority complex, and Adler was especially interested in how such psychological dynamics had implications for individuals' style of life and management of their self-esteem. From Adler's perspective, social comparisons and power dynamics in families were central in the individuals' sense of self. Adler's insights led him to advocate the importance of egalitarianism—including equal treatment of siblings—as an important preventive measure in promoting self-esteem. He also highlighted the ways in which individuals compensate; they create sometimes maladaptive styles of life when they find themselves in circumstances that are less favorable to themselves than to others. Building on the tenets of Adler's theory, Rudolf Dreikurs constructed a parent-education program designed to mitigate problem behaviors in children and to promote positive family relationships (e.g., Dreikurs & Soltz, 1964).

Adler's ideas about the centrality of sibling experiences in personality development were a basis for his interest in birth-order effects on individual development, a topic beyond the scope of this review, and they also were central in his ideas about sibling relationship processes—particularly siblings' rivalry around parents' attention and time and for family resources. According to Adler, rivalry between siblings is grounded in each child's need to overcome potential feelings of inferiority. As a means of reducing competition, siblings often differentiate or "de-identify," developing different personal qualities and choosing different niches. In this way, sibling differentiation is a key dynamic in families and, relevant to our focus here, it is thought to support the development of more harmonious and less conflictual sibling relationships. As we reveal here, research on parents' differential treatment of siblings is consistent with Adler's theory in documenting that parental favoritism of one sibling over the other is linked to poorer sibling relationships. We know very little, however, about how differences between siblings' personal qualities emerge or about how siblings' personal qualities and sibling differences are related to the quality of sibling relationships.

Parents recognize differences between their children in behavior, personality, and needs, and they often cite children's personal characteristics as motivation for treating their offspring differently (McHale & Crouter, 2003). Despite social norms in Western culture that call for parents to treat their children equally (Parsons 1942/1974), differential treatment of siblings is common across the life span (e.g., Suitor & Pillemer, 2000; Tucker, McHale, & Crouter, 2003). Furthermore, a growing body of evidence suggests that parental differential treatment is linked to less positive sibling relationships from early childhood through adolescence

(Brody, Stoneman, & Burke, 1987; Shanahan, McHale, Crouter, & Osgood, 2008; Stocker, Dunn, & Plomin, 1989). An important line of study reveals, however, that contexts in which differential treatment occurs have implications for siblings' relationship qualities. For example, siblings' perception of parents' reasons for differential treatment (Kowal & Kramer, 1997) and parental fairness (McHale, Updegraff, Jackson-Newsom, Tucker, & Crouter, 2000) may be as or more important for sibling relationship quality than the amount of differential treatment per se. Differential treatment may also have different implications depending on the domain (e.g., warmth, discipline, chores) in which it occurs (McHale, Updegraff, Jackson-Newsom, et al., 2000). Research on Mexican American families suggests that cultural factors also may be at play, such that differential treatment has more negative implications in individualistic than in collectivistic cultures (McHale, Updegraff, Shanahan, Crouter, & Killoren, 2005). This may be because family roles and expectations are more differentiated as a function of gender and age in some collectivistic cultures, which makes for clear reasons for differential treatment and possibly perceptions that it is fair (Nuckolls, 1993; Weisner, 1993). Our review of ecological theory highlights the role of macrosystem forces like cultural values as an important direction for future work on sibling relationships.

In adulthood, differential treatment dynamics persist, with parents making distinctions among their offspring across a variety of domains, including closeness, intimate disclosure and confiding, and the provision of emotional as well as instrumental support (e.g., Fingerman, Miller, Birditt, & Zarit, 2009; Suitor & Pillemer, 2000, 2006, 2007; Suitor, Pillemer, & Sechrist, 2006). Much of the focus of research on differential treatment in adulthood has been on the predictors of such treatment (e.g., offspring gender, birth order, similarity in values), and less attention has been paid to the consequences of such treatment for relationships between siblings or for their individual well-being. Consistent with Adlerian theory and with findings in the childhood literature, one study found that adult sibling relationships were most positive when parents treated siblings equally (Boll, Ferring, & Filipp, 2003). Given the little research that has been done, the implications of differential treatment for well-being in adulthood—including its moderators—remain an important avenue for future research.

In addition to work on parents' differential treatment, the focus on sibling rivalry and competition for parent and family resources has seen a resurgence of interest in recent years. Sulloway (1996) led the way in *Born to Rebel: Birth Order, Family Dynamics, and Creative Lives*. Grounding his ideas in an evolutionary perspective that stresses the adaptive significance of behavior in competition for limited resources, Sulloway placed sibling rivalry at the core of family relationships and personality development. Building on Adler's ideas, Sulloway argued that sibling differentiation serves to minimize sibling competition, and that siblings will select unique niches in the family that maximize their access to resources. From an evolutionary perspective, the development of sibling differences is an adaptive process because variation in offspring traits increases the likelihood that at least one sibling will survive under adverse circumstances (Belsky, 2005). In the face of its conceptual appeal, however, we still know little about the development of sibling rivalry and its links to sibling differentiation. Rather than studying the development of sibling dynamics directly, Sulloway drew on data about adults. Although some empirical research on sibling relationship development provides evidence for sibling differentiation processes and suggests that differentiation is associated with improved sibling relationships (Feinberg, McHale, Crouter, & Cumsille, 2003; Whiteman & Christiansen, 2008), findings are inconsistent (e.g., Whiteman, McHale, & Crouter, 2007; Whiteman, Bernard, & McHale, 2010). Future research should investigate sibling differentiation processes directly and test their links to sibling rivalry and competition (Whiteman, Becerra, & Killoren, 2009).

Although psychoanalytic and evolutionary theorists point to sibling rivalry as a root of sibling conflict (and personality development), other work has challenged this assumption. Felson (1983), for example, suggested that, during adolescence, access to resources (e.g., television, clothing, tangible goods) and family conditions (e.g., likelihood of parental intervention, division of labor) promote conflict between brothers and sisters as opposed to frustrations stemming from sibling jealousy and rivalry. Prochaska and Prochaska (1985) found that most youths reported sibling conflicts that were the result of personal or dispositional factors (e.g., being in a bad mood, retaliation for an earlier transgression committed by a sibling) rather than attempts at gaining parental attention. Norms and expectations also may play a role in sibling rivalry and conflict. Cross-cultural research suggests that sibling relationships may be less conflictual in cultures with where roles of older and younger sisters and brothers are prescribed (e.g., Nuckolls, 1993). Given these varied patterns, understanding the etiology and developmental trajectory of sibling rivalry separate from sibling conflict is an important direction for future research on sibling relationships. In fact, little research has attended to the nature of rivalry in early, middle, or late adulthood. As mentioned earlier, many adult siblings feel close to and often provide support to one another, and the developmental tasks of emerging and middle adulthood, including identity development and a focus on the world beyond the family, may serve to reduce rivalry and increase feelings of closeness, at least for some dyads. Longitudinal data on sibling relationships from childhood through early to late adulthood are needed, however, to describe such relationships and to understand how sibling rivalry and conflict change over time.

Social Psychological Processes in Sibling Relationships

Social psychological theories are directed at explaining how others influence individuals—including their cognitive constructions of what others are like and what motivates others' behaviors. Attribution theory (Heider, 1958), for example, focuses on individuals' explanations of the causes of behavior and events, including their own behavior and the behavior of their social partners, and stresses the significance of attributions for individuals' reactions to interpersonal events and experiences. From this perspective, harmony and conflict in social relationships are grounded in relationship partners' understanding of the motivations for one another's behavior. Social psychologists also are interested in group processes, including social norms, social roles, and social interaction dynamics. Despite their relevance to sibling relationships, however, social psychological theories have rarely been applied in studies of siblings.

One perspective of special relevance to sibling dynamics is social comparison theory. Proposed by Leon Festinger in the 1950s and reminiscent of Adlerian principles, social comparison theory holds that individuals are intrinsically motivated to evaluate themselves based on how they measure up against others, particularly others whom they perceive as like themselves (Festinger, 1954). An important part of this inborn motivation system is self-esteem enhancement (Suls, Martin, & Wheeler, 2002): individuals compare themselves to admired others, termed *upward comparisons*, and by detecting commonalities with individuals who have high levels of status or expertise, they enhance their sense of self; via downward comparisons, individuals enhance their sense of self in a defensive way when they find themselves better off than others. Given their shared family background and experiences, siblings are clear targets for social comparison, and indeed, theories about sibling rivalry, described earlier, assume that siblings engage extensively in social comparisons, such as about how their parents treat them versus their sisters and brothers.

There are only a handful of studies that directly assess social comparison processes in siblings. Feinberg, Neiderhiser, Simmens, Reiss, and Hetherington (2000) found that social

comparison processes depended on birth order, with older siblings more likely to make downward comparisons and younger siblings more likely to make upward comparisons. Others have noted that the implications of social comparison dynamics depend on factors such as age spacing, whether the domain of comparison is important to the individuals involved, and the nature and history of the sibling relationship (e.g., Connidis, 2007; Noller, Conway, & Blakeley-Smith, 2008; Tesser, 1980). For example, the negative effects of upward social comparisons are more pronounced when siblings are closer in age and have more conflictual relationships (Noller, Conway, et al., 2008). Theoretically, however, upward comparisons between siblings may also result in positive outcomes, wherein one's self-esteem is boosted by "basking" in the positive accomplishments of the sibling, as long as the domain of performance is not highly relevant to the individual's self definition (Tesser, 1980). How siblings realize different accomplishments or failures may also have implications for effects of social comparison. For example, in a case study of two families exploring sibling relationship qualities in adulthood, Connidis (2007) found that economic inequality was differentially related to sibling relationship quality as a function of the source of economic advancement. In one family, where economic advancement was the result of personal success (i.e., employment) on the part of older siblings, the relationship between older and younger siblings suffered, and younger siblings reported more ambivalent feelings. In contrast, in a second family where younger siblings were more economically advantaged primarily through marriage and not necessarily personal success, sibling relationships were more positive. Findings like these highlight some of the complexities involved in sibling relationship dynamics, including the multiplicity of factors that interact to influence how brothers and sisters feel about each other. The limited work available, however, suggests that study of social comparison processes may be a fruitful direction for research on sibling relationships across the life span. As we noted previously, however, it is important to study social comparison processes directly rather than inferring their operation on the basis of patterns of sibling relationship outcomes.

Equity theory (Adams, 1965; Walster, Walster, & Berscheid, 1978) builds on the phenomenon of social comparison in explaining social relationship processes and individuals' satisfaction with their relationships. From this perspective, individuals track their contributions to and the rewards they derive from their relationship relative to the contributions and rewards of their partners. Relationship dissatisfaction, emotional distress, and efforts for relationship change, including withdrawal from a relationship, are a result of an imbalance between partners' ratios of rewards versus contributions to their shared relationship. A related perspective, social exchange theory (Thibaut & Kelley, 1959), also focuses on individuals' rewards from and investments in their social relationships. From this perspective, when a relationship's costs outweigh its benefits, individuals will choose to withdraw from that relationship, particularly when alternative, more satisfying relationships are available to them. Equity and exchange tenets were developed to explain dynamics in voluntary relationships and have been studied most often in adults, possibly because of the complexity of the social cognitive processes involved and the theories' focus on individual rather than developmental differences. The more voluntary nature of sibling relationships in adulthood means that equity and exchange theories can be usefully applied to explain differences between sibling dyads that remain close and those with more distant relationships.

One area in which equity theory has been applied is implications for the sibling relationship of how siblings share care for an elderly parent. In the face of equity considerations, the provision of care for a parent usually falls on the shoulders of one offspring, and primary caregivers often report feelings of distress when their siblings fail to share caregiving responsibilities (Ingersoll-Dayton, Neal, Ha, & Hammer, 2003; Suitor & Pillemer, 1996). Consistent with the idea that inequity motivates change, Ingersoll-Dayton et al. (2003) found

that siblings engaged in a variety of behavioral as well as psychological strategies to reestablish equity. These strategies included asking for more assistance, considering personal (e.g., personality) and contextual factors (e.g., presence of children or other family demands) that may explain limited contributions, and maximizing or minimizing the significance of contributions to maintain perceptions of equity. Further in line with equity theory, Ingersoll et al. found that, when efforts to create equity were unsuccessful, distress increased. In fact, one study showed that when caregiving inequities were too great, sibling relationship dissolution occurred: Strawbridge and Wallhagen (1991) found that siblings stopped interacting or even sought legal action against one another when distress over caregiving became intense.

As with the literature on parents' differential treatment, research using an equity theory framework highlights that perceptions of fairness or justice may mediate links between inequity and relationship qualities (e.g., Boll, Ferring, & Filipp, 2005; Cicirelli, 1992). Cicirelli (1992) reported that, although about 80% of siblings engaged in an unequal proportion of care for their parents, less than half considered that distribution to be unfair, and Boll et al. (2005) found that siblings' ratings of the justness of their parents' differential treatment in adulthood mediated the links between differential treatment and family relationship qualities. Future research should build on these efforts to document the range of mediating psychological processes as well as the contextual conditions that may moderate the linkages between siblings' family experiences and the qualities of their sibling relationships.

Social Learning Theories

Social learning processes are probably the most common set of mechanisms used to explain sibling relationship dynamics, especially the dynamics of child and adolescent siblings. According to social learning theories, individuals acquire novel behaviors, including cognitive behaviors such as attitudes and beliefs, though two key mechanisms, reinforcement and observation of others' behaviors (Bandura, 1977). Research on sibling relationships in childhood and adolescence targets the role of parents, such as when they model effective conflict resolution strategies in their marriage relationship or praise their children for getting along well; or in contrast, when they fail to do either or model decidedly negative behaviors. Siblings also shape their own relationship in the context of their social exchanges, such as by reciprocally reinforcing positive or negative behaviors, and by observing and imitating one another. Most family contexts provide ample opportunity for these social learning processes to operate.

The tenets of observational learning also suggest that members of the family are salient models for social learning. That is, individuals are most likely to imitate models who are warm and nurturant, high in status, and similar to themselves (Bandura, 1977). These tenets imply that family members' interactional styles are important sources of learning. For example, family members who are warm and loving and viewed as competent and powerful (e.g., parents, older siblings) may be especially powerful models. Children learn social competencies in their interactions with parents and siblings, and by observing their family members' interactions with others. And as we discuss later in this section, not all of what siblings learn is positive, as they often imitate negative relationship dynamics such as conflict, hostility, and aggression. Social learning principles also imply that modeling processes in sibling relationships vary as a function of the sibling dyad constellation, with older and same-gender siblings more likely to serve as models. Siblings close in age may be imitated because of their similarity to self, but a larger age gap between siblings also may invest an older sibling with power and high status and thereby promote modeling. Some research on sibling influences has tested the effects of parent and sibling characteristics as

potential moderators of observational learning processes, yielding evidence that is congruent with these theoretical principles (e.g., Slomkowski, Rende, Conger, Simons, & Conger, 2001), but findings are not entirely consistent (e.g., Whiteman, McHale, et al., 2007). Given the mixed findings, it is important for future research to continue to examine moderators (e.g., relationship style, status, power) of social and observational learning and to measure those processes directly as opposed to inferring their operation on the basis of observed patterns of similarity (Whiteman, Becerra, et al., 2009).

In addition to observational learning processes that occur outside their dyadic exchanges, siblings also can influence their relationship dynamics directly by virtue of their own behaviors in everyday interactions. Coercive cycles are social exchanges involving escalating negativity and reinforcement processes (Patterson, 1984). As an example of this dynamic in the sibling relationship, siblings may learn to get their own way by increasing their level of hostility and aggression toward a sister or brother during conflict episodes. When the sister or brother gives in, the aggressive sibling is positively reinforced for escalating negativity (and negativity will increase in subsequent episodes), and the sister or brother is negatively reinforced for giving in. Because both siblings also can learn that escalating negativity results in getting their way, sibling relationships have been described as a training ground for aggression (Patterson, 1986).

Siblings also mutually promote negative behavior through deviant talk, when they reward one another with positive regard and by imitation for stories and plans about risky and delinquent behaviors and activities (Bullock & Dishion, 2002). Most sibling research in the social learning tradition has focused on how brothers and sisters influence one another's individual adjustment, including conduct problems, substance use, and risky sexual practices, and so is beyond the scope of this review. To the extent that siblings can have an impact on one another's social behavior and development, however, the sibling relationship can be considered a forum for social learning processes.

A growing body of empirical work has tested the tenets of social learning theory in the context of sibling relationships. Research on parents' role in shaping sibling relationships suggests that parents exert direct efforts to regulate and influence sibling interactions, often in the form of intervening in sibling disputes (Perlman & Ross, 1997). In childhood, parental intervention in sibling conflict appears to have a positive impact on sibling relationships. When parents model appropriate reasoning techniques and scaffold children's conflict resolution skills, siblings are more likely to use effective strategies, such as compliance and perspective taking, to resolve sibling disputes (Kramer, Perozynski, & Chung, 1999; Perlman & Ross, 1997). Intervention programs designed to train parents in how to effectively manage sibling relationships have found positive effects for reducing sibling conflict, promoting positivity, and improving children's conflict resolution skills (Siddiqui & Ross, 2004; Tiedemann & Johnston, 1992). The same positive effects of parental intervention are not found in adolescence; rather, there is some evidence from cross-sectional research that adolescent siblings relationships are more negative in the face of direct parental intervention, possibly because parents continue to intervene in adolescence only when sibling relationships are very poor (Kramer et al., 1999; McHale, Updegraff, Tucker, & Crouter, 2000).

Parents also influence sibling relationships when they serve as models in the context of marital interactions and in their dyadic exchanges with their children. This type of influence has been termed *indirect* because the goal is not to explicitly shape sibling relationships (Parke & Buriel, 1998). Evidence suggests that marital and sibling relationship qualities are correlated, and it shows that the parent–child relationship may serve as a mediator of those linkages (Brody, Stoneman, & McCoy, 1994; Dunn, Deater-Deckard, Pickering, & Golding

1999; Noller, Feeney, Sheehan, & Peterson 2000; Reese-Weber & Kahn, 2005; Stocker & Youngblade, 1999). As predicted by social learning theory, troubled marital relationships are generally linked with more hostile parent–child *and* sibling interactions. In contrast, however, as mentioned earlier, Jenkins (1992) found that, in the context of intense marital conflict, some siblings actually grew more intimate, turning to one another for emotional support. These findings support the idea that parents have an influence on siblings' relationship experiences but that observational learning is not the only process underlying these associations.

Of course, siblings themselves have a major part in shaping their relationships. Through daily exchanges, siblings directly reinforce one another's behavior (Patterson, 1984). Siblings also serve as models for one another, a process that may contribute to findings of similarity between siblings in many different domains, including delinquency and aggression (e.g., Bank, Patterson, & Reid 1996; Slomkowski, Rende, Conger, et al., 2001), substance use (e.g., Slomkowski, Rende, Novak, Lloyd-Richardson, & Niaura, 2005), sexual behavior (e.g., Rodgers & Rowe, 1988), and social competence (Stormshak, Bellanti, Bierman, & Conduct Problems Prevention Research Group, 1996). Findings on sibling influences must be viewed with caution when studies fail to include information about the larger family environment. For example, siblings often share parental models, and thus it is important to conceptualize and study sibling influences on their relationship in the context of larger family processes.

Family and Ecological Systems Approaches

A family systems framework directs attention to the larger context in which sibling relationships develop. The tenets of family systems theory are derived from general systems theory (Bertalanffy, 1950). In that perspective, families are best understood when studied holistically. Families are seen as hierarchically organized into interdependent, reciprocally influential subsystems; that "hierarchy" ranges from individuals to dyads (sibling relationships, marital relationships, parent–child relationships), triads (e.g., parent–sibling triad), and beyond to ultimately encompass the entire family system, including grandparents, aunts, and uncles. Ideally, subsystems have flexible boundaries that allow for, but are not determined by, influences of other subsystems; furthermore, some boundaries, particularly intergenerational boundaries, such as those between the marital and child subsystems, are more important to maintain than other boundaries, such as those between pairs of siblings. Coalitions in families are subsystems within families with more rigid boundaries and are thought to be a sign of family dysfunction.

A family systems approach also highlights the dynamic nature of family structure and process: Families adapt in response to changes in internal and external needs and circumstances, including the development of individual family members. Although dynamic, families strive to strike a balance between stability and change. Both rigid adherence and continual fluctuations in norms, roles, and activities are thought to characterize dysfunctional families and relationships.

As these ideas about family change imply, families also are open systems—subject to external influences. Bronfenbrenner's (1979, 1986) ecological systems theory proposes multiple levels of contextual influence on individual development, but those levels of influence also are relevant to sibling relationships. The *microsystem* refers to the immediate contexts of everyday life, such as family and neighborhood. Forces at this level can support close and involved sibling relationships, and they can define distinct activity niches for siblings based on their age and gender. The *mesosystem* refers to the connections between microsystem contexts. For example, norms about age and gender segregation may be

consistent as siblings move from family and neighborhood to school, or siblings may have to adopt different ways of behaving toward one another in different settings. The *exosystem* refers to contexts that siblings are not directly engaged in but that have an indirect impact on their relationship by virtue of their effects on the microsystem. Parents' long hours in the workplace, for example, may have an impact on older siblings' caregiving responsibilities for their younger brothers and sisters and thereby promote complementarity rather than egalitarianism in sibling roles. Finally, the *macrosystem* refers to the broader societal context, including political, economic, and cultural forces that affect individuals and family relationships. For example, by some accounts, the sibling rivalry that is considered central to sibling dynamics in individualistic, Western cultures is not a dominant feature of the dynamics of sibling relationships in Eastern, more communally oriented cultures (Nuckolls, 1993).

The limited research that has tested systems principles provides some insights into family processes that affect sibling relationships. As previously discussed, a number of studies have established links between sibling relationship quality and marital and parent–child subsystems. Consistent with family systems theory, the links appear to be reciprocal, in that sibling relationships affect other subsystems and vice versa (Kim et al., 2006; Yu & Gamble, 2008). Family coalitions are associated with problematic sibling relationships (McHale, Crouter, McGuire, & Updegraff, 1995; Volling, 1997), perhaps as a result of troubled marital relationships or rigid boundaries that exclude certain family members from involvement in the subsystem. A family systems perspective suggests that, during transition periods, the system is more "open" and thus susceptible to changes. Empirical work supports this idea, as changes in sibling dynamics are observed around the transition to adolescence (Kim et al. 2006; Brody, Stoneman, & McCoy, 1994), parental divorce (Abbey & Dallos, 2004; Sheehan, Darlington, Noller, & Feeney, 2004), and the transition period when the firstborn sibling moves out of the family home (Whiteman, McHale, et al., in press). To date, such family systems processes have not been examined in adult sibling relationships.

Forces outside the family also have the potential to impact sibling relationships. Environmental factors that both siblings may share, such as the family's socioeconomic status (SES) and neighborhood, provide a specific context in which sibling exchanges occur. Most sibling researchers treat SES as a control variable, and the handful of studies that has explicitly tested the role of SES factors has produced mixed findings: Some studies have reported that lower SES is linked with more negative sibling relationships (Conger, Conger, & Elder, 1994; Dunn, Slomkowski, & Beardsall, 1994), whereas others have found the opposite association (McHale, Whiteman, Kim, & Crouter, 2007; Updegraff & Obeidallah, 1999). Neighborhood characteristics have not been systematically linked to sibling dynamics; however, Updegraff and Obeidallah (1999) found that young adolescents living in neighborhoods with a high number of common play areas (e.g., public parks, playgrounds) were more likely to develop intimate relationships with their peers than with their siblings. The research on adult siblings takes contextual factors into account in documenting the significance of geographic proximity in siblings' contact (e.g., Connidis & Campbell, 1995). New technologies such as e-mail, Facebook, and Skype that are becoming increasingly common means for communication may have a significant impact on the relationships of siblings who are geographically dispersed, and their utility in supporting siblings' feelings of connectedness and support are an important direction for future study.

Finally, a small but growing body of empirical work has examined how the cultural forces that are part of the macrosystem affect sibling relationships. Research on minority families living in the United States highlights the role of cultural values and experiences in shaping sibling dynamics. For example, familism values (i.e., one's sense of family obligations) are linked with more intimate sibling relationships among Mexican American adolescents and

may mitigate the potentially harmful effects of parents' differential treatment (McHale, Updegraff, Shanahan, et al., 2005; Updegraff, McHale, Whiteman, Thayer, & Delgado, 2005). Work on African American siblings has suggested that discrimination experiences, ethnic identity, and relationships with extended kin are key cultural forces that are associated with sibling relationship quality (Brody, Stoneman, Smith, & Gibson, 1999; McHale, Whiteman, et al., 2007). Cross-cultural research has emphasized the caregiving responsibilities of older siblings and the hierarchical structure of sibling roles in non-Western societies, as well cultural differences in sibling dynamics such as rivalry and competition (Maynard, 2004; Nuckolls, 1993; Weisner, 1993; Zukow, 1989).

Although this body of work is consistent with systemic principles, family and ecological systems processes have remained a challenge to operationalize and thus are not frequently the focus of empirical scrutiny in sibling research (or family research, more generally). The sheer variety of sibling relationship structures may be one deterrent—as one study identified 26 different possible sibling relationship constellations (e.g., twins, biological siblings, stepsiblings, adopted siblings; Treffers, Goedhart, Waltz, & Koudijs, 1990). Systems perspectives also are limited in their theoretical propositions in the sense of defining specific mechanisms of influence, and thus, bringing relationship dynamics proposed by analytic, social psychological and social learning theories to bear in a family systems framework may be a fruitful research direction.

Conclusion

At the most general level, our review underscores the significance of siblings for understanding family dynamics and systems, and it should stimulate research attention by family scholars to this relatively neglected relationship. The chief principles to emerge from our review are that sibling relationships are similar in important ways to other close relationships in the family. First, sibling relationships are multidimensional, and they vary across time and place. As such, we should not expect that a single theoretical perspective can account for the developmental, family, and group differences that have been observed in sibling relationships. Indeed, concepts grounded in each set of perspectives reviewed here, as well as other sociologically grounded frameworks not reviewed here (e.g., Allan, 1979; Elder, 1996; Matthews, 2002; Walker et al., 2005) serve to illuminate key dimensions of the sibling relationship and the forces that shape them. Importantly, as in other close relationships, the processes that affect sibling relationship dynamics operate at a variety of levels, ranging from intrapsychic processes such as attachment and social comparison to relational dynamics such as social learning and more distal forces beyond the family such as sociocultural influences. And, although longitudinal research on sibling relationships is rare, our review suggests that some dynamics may be more influential at particular periods in the life course than others. This latter issue is ripe for future research and would inform understanding of the development of close relationships across the life span.

Another important direction for future sibling research is the design of studies that incorporate analyses of a broader range of influence processes in an effort to illuminate how insights from the various perspectives complement one another. For example, research rooted in psychoanalytic traditions has been important in understanding how dynamics such as parents' differential treatment relate to sibling relationship qualities. However, a more complete understanding of these links is possible when other psychological and social processes, such as notions of equity and fairness, as proposed by social psychological theories, and sociocultural forces, as proposed by ecological and systemic perspectives, are taken into account. In this way, research on sibling relationships could serve as a model for studying other kinds of close relationships. Finally, because sibling relationships are the longest-lasting relationship that most individuals share—a quality that makes sibling

relationships unique—it is essential that future work examine them over extended periods of time. Longitudinal research on siblings offers family scholars a window into how family relationships develop and change, as well as the opportunity to understand the multiple processes and contexts that influence these lifelong bonds.

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