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Siblings in the “mixed” adoptive home: The relationship between children when one is born, and the other is adopted, into the same family.

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PAPER ABSTRACT

Eighty percent of children in the U.S. and Britain are raised with a sibling. However, little is known about the relationship of those children in the adoptive home. Even less is known about the relationship, and the family's adjustment, when they coming into the family by different means: by birth and adoption. This paper is a synthesis of literature on the possible relationship between those siblings being raised together in the ‘mixed’ adoptive home. Based a broad review of research literature from the fields of adoption, developmental psychology, and behavioural genetics, it discusses adoptive family functioning, and the sibling relationships, when raising both adoptive and birth children together.

SIBLINGS IN THE "MIXED" ADOPTIVE HOME:

THE RELATIONSHIP BETWEEN CHILDREN WHEN ONE IS BORN, AND THE OTHER IS ADOPTED, INTO THE SAME FAMILY.

ABSTRACT

Eighty percent of children in the U.S. and Britain are raised with a sibling. However, little is known about the relationship of those children in the adoptive home. Even less is known about the relationship, and the family's adjustment, when they coming into the family by different means: by birth and adoption. This paper is a synthesis of literature on the possible relationship between those siblings being raised together in the 'mixed' adoptive home. Based a broad review of research literature from the fields of adoption, developmental psychology, and behavioural genetics, it discusses adoptive family functioning, and the sibling relationships, when raising both adoptive and birth children together.

BACKGROUND

The practice of adoption is as complex as it is old, and one that touches many lives, despite its relatively low incidence. Besides the more obvious people involved (the adoptee, birth parents and adoptive parents) adoption influences the lives of many other people including siblings—birth and adoptive. Yet, even with its widespread influence, research into the effect of adoption is still selective and sparse. For instance, a great deal has been written about the experience of birthmothers (e.g., Jones, 1993; Solinger, 1992), yet little is known about the birthfather (e.g., Deykin, Patti, & Ryan, 1988). Likewise, while many researchers have investigated the adjustment of adoptees (e.g., Brodzinsky, Schechter, & Brodzinsky, 1986), few have extended their studies to other children in the adoptive home. Fewer still have sought to describe the relationship that develops *between* children in the "mixed" adoptive home, when one is adopted and the other is born to the adoptive parents. It is this relationship between siblings that the present paper seeks to describe.

WHO ADOPTS AND WHY?

Although the focus of this paper is on the relationship between birth and adoptive siblings, a description of who adopts and why is included in an effort to understand the environment in which the sibling relationship will be forged. Broadly speaking, people adopt either to create a new family (usually due to infertility) or to expand an existing family.

Infertile adopters

Infertility is often cited as the driving force behind the majority of adoptions, both in New Zealand, and abroad. Believing that they cannot conceive children themselves, couples will turn to adoption. In this way, adoption is rarely a first consideration. Rather, it usually comes after a long and painful series of fertility treatments that may take years, with no success (e.g., Brinich, 1990; Cole, 1985).

Demographically, these couples may be older, having delayed starting a family, only to later discover their infertility. They may also be more educated, and have a higher financial standing, with both partners usually working outside the home (Cole, 1985). Because they have never had children of their own, these couples will typically prefer infants, of the same race, but will consider the inter-country adoption of children of other races if there are no infants available domestically (Deacon, 1997). In many cases, the adoptee(s) will be the couple's only child(ren).

Fertile adopters

In contrast, there are the fertile adopters: people with children of their own who adopt for humanitarian reasons, or to add to their existing family. This category also includes those who have adopted for reasons of gender control. For instance, families with all daughters who want a son, may not trust the next pregnancy to result in a boy, so they will adopt one[1].

According to Glidden (1994), fertile adopters in the U.S. are not as well educated, or as affluent as the traditional infertile adopters. Feigelman and Silverman (1979), on the other hand, described U.S. fertile adopters as high-income earners, university educated, with white-collar jobs, and an average of three children. Despite the demographic contradictions, what distinguishes this group from the typical infertile adopters is the children they choose. Also referred to as "preferential adopters," these couples are often sought after by adoption placement professionals because of their willingness to take many of the "special needs" children: those who may be older, racially different, part of a sibling group, or developmentally disabled (Feigelman & Silverman, 1979). Because fertile adopters usually have children of their own, the subsequent adoption of any children (special needs or not) will result in the creation of a "mixed" adoptive home, with both natural and adoptive children being raised together, the setting for the relationship under investigation.

Post-adoption fertility

Occasionally, the "infertile" adopters, who believed they couldn't conceive, will become pregnant after they adopt a child. This is referred to as "post-adoption fertility" (Kraus, 1987). The likelihood of this happening is not uncommon (although any further discussion is beyond the scope of the paper), and as with the "fertile" adopters, results in the creation of a "mixed" adoptive home.

[2] This is not considered an humanitarian motive, however, their fertility excludes them from the previous category. Please note also that this type of adoption was much more common three decades ago, when there was a surplus of children needing homes. It is rarely seen today in New Zealand or elsewhere.

WHAT IS KNOWN OF THE MIXED ADOPTIVE HOME?
THEORETICAL AND EMPIRICAL EVIDENCE

Common though it is to find mixed adoptive homes, there is a paucity of empirical research on this type of adoptive family, with virtually no research on the sibling relationships that develop therein. Even when the researcher claims to be examining the adoptive *family* relationships, and acknowledges other children in the home, it is not unusual to find the other siblings excluded from the design or measures (e.g., Glidden, 1994; Grotevant, McRoy, Elde, & Fravel, 1994; Rosenberg, 1989). What is known comes primarily from research into adoptive family functioning, with some focus on the influence of family structure variables.

FAMILY FUNCTIONING

Mixed adoptive families in the U.S. have, on occasion, been compared with all adoptive and non-adoptive families, usually in terms of parental or child functioning. For instance, Hoopes (1982) conducted a longitudinal study designed to investigate adoptive family functioning. She compared adoptive families with non-adoptive families, and at one point in the study, included a set of mixed adoptive families for further comparison. Using an interview designed to measure “parental functioning,” “attitudes about adoption,” “individuation,” and “self-esteem,” she found that the parents in the mixed adoptive homes scored lower than the other two types on “parental functioning;” in particular, this group of parents had the lowest level of satisfaction at parenting.

Furthermore, the fathers from the mixed adoptive families also scored lowest on the “attitudes about adoption” scale, showing that they had the greatest difficulty acknowledging their children’s birthfamily. Because of the presence of both natural and adopted children, and the need to acknowledge the differences between them, Hoopes believes that the parents in the mixed adoptive homes (fathers in particular) may be having difficulty coping with their dual roles as both birth and adoptive parents to their children. (Hoopes, 1982). Regarding the other two interview items, there were no differences found between the three family types. It should be noted, however, that the mixed families made up only a small portion of the total sample (11 out of the study’s 54 families), as they were not the focus of the study.

Ternay, Wilborn and Day (1985) studied the personal and social adjustment of children in families consisting of all natural children; all adoptive children; and mixed children (all aged between ten and 12 years). Findings from the study revealed that on measures of personal adjustment (a composite

of six sub-areas consisting of: self-reliance; sense of personal worth; sense of personal freedom; feeling of belonging; withdrawing tendencies; and nervous symptoms), adopted children from mixed families had higher adjustment scores than adoptees from full-adoptive homes, with the first three sub-areas providing the greatest contribution to the score. (There were no differences between the three family types on the social adjustment scores.) Whether this outcome was influenced by the presence of birth children, or some other factor remains to be seen. The finding does suggest that the presence of birth children in the adoptive family does not necessarily impair the adjustment of the adoptive child, and in fact, might even enhance it. However, pertinent adoption and status variables were not included, such as age at adoptive placement, age difference between siblings, or total number of children in the homes.

Ternay et al. (1985) also studied the perceptions of child-parent relationships between family members, and found that the perception of the child-parent relationship was similar for all sets of parents, alluding to the notion that adoptive parents may be experiencing parenthood in a manner similar to natural parents. Overall the results from this study provide little evidence that mixed adoptive families are more at risk than all adoptive families, or natural families. However, as with most of the research on mixed families, the study failed to include any measures that described the interaction between siblings.

Mixed adoptive families have also been looked at from a family systems paradigm, again with conflicting results (e.g., Reitz & Watson, 1992; Talen & Lehr, 1984). Seen, on one hand, as functioning no differently than non-adoptive homes (Reitz & Watson, 1992), other studies have shown mixed homes to have a problem with the perceptions and treatment of the adoptive child, in relation to the non-adopted child (e.g., Talen & Lehr, 1984). In this context, the adoptee was frequently seen as "distinct from the family," with their developmental changes, behaviours and emotions often being attributed to the adoptees unknown past (p. 385).

In one final study of mixed adoptive families, focusing on the adjustment of the adopted children, the findings were unusually positive (Benson, Sharma, & Roehlkepartain, 1994). Comparing the adoptees to their non-adoptive siblings, both groups (between the ages of 12 and 18) were asked to agree or disagree with positive statements about five family domains: child-parent relationships; warmth; communication; parents as resources; and extended family. (An example of a statement is "There is a lot of love in my family" or "My parents are easy to talk with"). The researchers found that not only were the adoptees as likely as their non-adopted siblings to respond affirmatively in all five domains, but in the area of "extended family," they had significantly higher percentages, with a greater number agreeing with the statement, "My relatives make me feel like I'm really part of the family" (Benson et al., 1994).

The adoptees of the study were then compared to a national sample of adolescents on a similar scale of family dynamics. Again, the adoptees matched or exceeded the national sample percentages. However, it should be noted that the national sample and the adoptees differed in terms of geographical spread, family composition, family income, and education. In fact, the only area they matched on was age. Moreover, these findings go against much of the current research on adoption, and as such, have been challenged by other adoption researchers for their conclusions as well as their methodologies (e.g., Axness, 1996).

Family structure

The mixed adoptive family, containing both birth and adoptive children, has also been studied looking at the composition of those children within the home. In this context, some researchers have looked at the adjustment of usually one target adoptee within different family constellations; that is, when they were raised alone, or with one or more birth and/or adoptive siblings. Again, the outcomes vary.

Brodzinsky and Brodzinsky (1992), for instance, studied the adjustment of 130 adopted children (aged six to 12 years) from U.S. families in the general population. They found that “only” adopted (those without siblings) and “first” adopted children (those with younger adopted siblings only) scored highest on measures of behavioural problems, as compared with adoptees with older adopted siblings, and those with either younger or older non-adoptive siblings. The researchers stated, however, that taking the rest of the data into consideration, from which there were no other differences (behaviour was only one of several variables being measured), this finding may have occurred by chance. They concluded, therefore, that family constellation variables have relatively little influence on adoptee adjustment. No measures were taken for the other children in the family, birth or adoptive, nor was the age difference between children established.

Kraus (1987), on the other hand, using a community-based sample of 210 adoptive families in New South Wales, had very different outcomes. He found that the arrival of natural children born *after* the adoption, created serious behavioural dysfunctions in the target adopted children (whose average age was seven), as compared to adoptees in homes with no natural children. Kraus concluded that the adoptive parents’ reasons for adopting (i.e.: infertility) played a pivotal role in the behavioural outcomes of the adoptees, after the unexpected birth of subsequent children:

> *“The attitude that adoptive parents take towards [the adoptee] was found to be related to their motive for adopting: if the motive was to fulfil a need of the parents, they become negative; if it was the desire to care for and bring up children, changed circumstances do not affect their acceptance of the child.”* (Kraus, 1987, p. 333).

It should be noted that the focus of this investigation was the adjustment of one target adoptive child within each adoptive home, as measured by clinical classifications of behaviour problems. Again, no measures of behaviour problems were taken for the other children in the family, nor were any other status variables considered, such as age differences between children. Furthermore, these finding can only be generalised to boys, as the study failed to include female children.

Ordinal position of children in the adoptive home

Despite the methodological limitations of the aforementioned studies on family structure, both Kraus (1987) and Brodzinsky and Brodzinsky (1992) bring to light a potentially influential factor thus far overlooked in the empirical study of mixed adoptive homes. It is the effect of ordinal position, otherwise known as "birth order" when looking at siblings from non-adoptive homes.

Researchers investigating the effect of birth order have traditionally focused on its potential explanation of intelligence differences in siblings, as well as its ability to explain the unique personalities of children raised in the same home (e.g., Lahey, Hammer, Crumrine, & Forehand, 1980;Sutton-Smith, 1982). For researchers of adoption, what may be more important is an inquiry into the "positioning" of birth and adoptive children (rather than the sequential order of all children in the home), and its effect on the children. In other words, how does positioning influence the sibling relationship if, for instance, the natural child comes before or after the adopted child? Unfortunately, no direct empirical research into this issue could be found. Nonetheless, the issue can be seen indirectly through the following study:

Acknowledgement of Adoption

Kirk (1984), in his classic research on adoption in the 1950's, made an unexpected discovery regarding adoptive parents. While analysing the over 1500 questionnaires sent out to U.S. and Canadian adoptive families, he and his colleagues found a qualitative differences in the statements made by mixed adoptive parents whose birth child came first (B-A), compared with those whose birth child came second (A-B). What they found were comments from the A-B adopters such as "Adoption is not different from natural parenthood," which the researchers perceived as more defensive. The B-A adopters, on the other hand, rarely made any distinction of their adoptive or natural parenting status. Kirk believed that this demonstrated what he called a "rejection-of-difference" coping mechanism in A-B adopters, whereas the B-A adopters demonstrated an "acknowledgement-of-differences" strategy. A subsequent inquiry was then done to confirm these theories, again with similar results (Kirk, 1984).

Three decades after Kirk's original study, Kaye (1990) conducted an investigation to test some of Kirk's theories. Researching what he called "high versus low distinguishing" (p. 122), he found that even in this era of less secrecy, many families still showed discomfort talking about adoption.

However, instead of finding a unidimensional continuum of high versus low distinguishing, Kaye reported more "subtle and multifaceted" responses, exemplified by participants' mixture of distinguishing and non-distinguishing sentiments. He concluded that low distinguishing should not be equated with "rejection" or "denial," and went on to say:

> *"[These terms] imply that all adoptive families really experience important differences and, deep down, feel them; with some acknowledging those differences while others resist doing so. The data ... indicate quite the contrary, that when people say their adoption has or has not been a major distinguishing factor, they are probably telling the truth."* (Kaye, 1990, p. 133)

However, Kaye's methodology and aims were somewhat different from Kirk's. He was not interested in contrasting A-B and B-A families, but rather, qualitatively researching coping strategies among members of adoptive families. Therefore, his study, while it contained mixed adoptive families, did not distinguish them from all-adoptive, and provided no additional insight into the issue of ordinal position.

SPECIAL NEEDS ADOPTIONS

The adoption research presented so far has been based primarily on what would be characterised as the typical "stranger" adoption: that involving the individual placement of an infant who is racially similar and biologically unrelated to the adoptive parents. What is needed now is a look at the mixed adoptive home within the context of "special needs" placements. Such an inquiry is particularly relevant to the present paper since, as noted in the previous section, it is the families with natural children who are the most likely to adopt these children. Within adoption literature, "special needs" refers to those children who are older at the time of placement; from other countries or of a different race; part of a group of siblings who have been relinquished; or developmentally disabled. (Special needs also includes those children who may have a history of abuse or multiple placements. However, given the nature of those characteristics, the children are likely to already be included in one of the other categories.)

Older child placements

Due to the long-standing desire for infants in adoption, children even as young as two years of age and older have often had difficulty finding permanent adoptive homes, and thus have come to be regarded as special needs placements. However, the number of infants available for adoption is steadily declining, in New Zealand and abroad. This, combined with social policies designed to reduce the number of children perpetually in foster care (often called "permanency planning"), has lead to an increase in the number of older children being adopted (O'Hara, 1991; Salo, 1990).

Many older adoptees have been through several foster placements before arriving into the adoptive home. They may also have survived early childhood abuse and/or trauma. As a result, they may bring with them emotional scars, behavioural problems, and a history of broken relationships.[2] They must then integrate themselves into an existing family structure. Nevertheless, researchers agree that neither the incoming child, nor the resident children, are usually sufficiently prepared for adoption (e.g., Jacobs, 1988; Ward & Lewko, 1988)

Research on the resident children in mixed adoptive homes

The arrival of a new sibling is difficult for any child, but the arrival of one who is partially grown (otherwise referred to as "non-infant") and biologically unrelated, is even more challenging. For that reason, the research into older child placements has paid particular attention to the adjustment of the natural, resident children in the home (Jacobs, 1988; Ward & Lewko, 1987, 1988).

At the time of an adoption, parents are understandably concerned with, and usually focused on, the adjustment of the adopted child. As a result, the parents may not be attending to the resident child, or anticipating their needs as both sets of children try to adjust. Depending on what was told to them, resident children may be expecting a playmate. Instead, they are faced with an adoptee who may have difficulties forming ties, and who is now competing with the natural child for the parents' love and attention (Ward & Lewko, 1987).

In addition, rules that once applied to everyone are sometimes changed for the adoptee, with the parents overlooking behaviours that once resulted in punishment. Ward and Lewko (1987) also found that resident children complained of boundary issues and changes in routine, as well as behaviours of the adoptee including lying, interfering with privacy, failing to obey house rules, and tattling. As a consequence, natural and adopted siblings may grow to resent one another, using the adoption as a tool to wound one another.

> *"A birth child may tell her adopted sibling, 'You weren't even born into the family,' or 'Your real mom didn't even want you.' And the adopted child may respond, 'Mom and dad had to keep you, but they wanted me.'"* (Melina, 1983, p. 3).

Overall, research into older child placements is sparse, and is further confounded with a number of factors that may influence and/or explain the adoptee's behaviour and subsequent relationships within the family. These child factors may include a history of multiple placements or previously disrupted adoptions, emotional disturbances, racial differences, etc. In addition, the adoptees in

[3] This may be particularly true if the adoption is closed, and the child's ties to the birth family have been severed. For that reason, it has been suggested that the older adoptee's integration into the adoptive home may be more

Ward and Lewko's 1987 study were all younger than the resident children. This is an important distinction, as researchers have suggested that placing a child older than the oldest child in the home may be even more problematic (Nix, 1983).

Finally, studies of older child placements, while they usually look at the adjustment of both resident and adopted children (more so for the former than the latter), they fail to investigate the overall relationship that must eventually evolve. Because of its similarity to older child adoption, literature on stepfamilies, and the sibling relationships that develop when biologically unrelated, non-infants are brought together in a family environment, has been included.

Research on siblings in stepfamilies

Sibling relationships in newly blended families can be quite complex, as children may acquire stepsiblings and, eventually, half-siblings, not to mention any siblings they had prior to the remarriage (Ganong & Coleman, 1993). These sibling relationships have been characterised in their initial stages of the remarriage as conflicted, ambivalent, negative, rivalrous, and possibly aggressive (e.g., Hetherington & Jodl, 1994). Hetherington and Jodl (1994) found that this was particularly true if the children were adolescents and/or male. Rivalries may also be intensified in larger families (Wallerstein & Kelly, 1980). Gender matching, on the other hand, may enhance solidarity between the siblings, as it forms the basis for shared activities and interests, regardless of age differences (Bernstein, 1997), but whether this is true for both girls and boys is not clear. Other factors that may influence the stepsibling relationship include relative age and the child's status prior to the remarriage, for example, being an only child or the youngest of several siblings (Ganong & Coleman, 1993).

Following the remarriage there appears to be a settling-in period, where children may initially complain of changes in routines, and losses in various family commodities (e.g.: attention, space, food, activities, etc.). However, the overall findings are that siblings within stepfamilies are only slightly more troubled than children from intact families, and that as the initial conflict decreases, children do eventually adjust (Ganong & Coleman, 1993; Hetherington & Jodl, 1994). One study found that often children reported that they really liked their new siblings (Wallerstein & Kelly, 1980), while another stated that the presence of stepsiblings was more problematic for the parents than it was for the children. This latter point illustrates the role that parents play in the adjustment of stepsiblings after remarriage, with research confirming that children often experience differential parental treatment between the custodial and stepparents (e.g., Hetherington, 1988; Hobart, 1989). (The effects of differential parental treatment on sibling relationships are discussed further on in the paper.)

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successful if it is an open adoption (Borgman, 1982). However, further discussion of this topic is beyond the scope of the present paper.

Since many of the stepchildren's early complaints resemble those found in older child placements, it may be that the two experiences are, indeed, similar. Coupled with the reports that initial conflicts do subside, and that children do adjust, these findings may have good implications for older child adoptions. Furthermore, Bernstein (1997) found that sibling solidarity may come from weathering a crisis together, another finding which may have positive ramifications for the adoptive family, if the adoption itself is seen as the crisis.

Inter-country and transracial adoptions

Inter-country adoption (ICA) is the adoption of children from another country, who may or may not be racially similar to the adopting family. Transracial adoption (TRA), on the other hand, involves the adoption of children who are racially different from the adopting family, but from the same broad culture. For instance, in the U.S., this would include white families adopting black children. In New Zealand, it might involve Maori children being placed in Pakeha (European) homes. Unfortunately, there are virtually no studies that investigate ICA or TRA with a focus on sibling interactions. In fact, most only fleetingly acknowledge the presence of other natural children in the home; yet still exclude them from the research design (e.g., Altstein et al., 1994; Deacon, 1997; Hoksbergen, 1997; Silverman, 1993).

One Canadian study, however, compared 155 inter-country adoptees to their non-adoptive siblings, as well as to adolescents in the general population (Cohen & Westhues, 1995). (Although the authors did not provide a definitive mean age of participants, it appears that adoptees ranged in age from 12 to mid-twenties, while the non-adopted siblings were somewhat older.) The study measured "self-esteem" using Rosenberg's Self-Esteem Scale, (1965, as cited by Cohen and Westhues, 1995). It also included a measure of "academic achievement" (comprised of the adoptee's assessment of satisfaction, and the adoptive parent's account of performance) and a measure of "friends" (another composite of adoptee and parent accounts). While the latter two measures produced no significant differences in the groups, on the measure of "self-esteem," the researchers did find that the adoptees fared better than the population at large, but not as well as their non-adopted siblings. (How well the adoptees were matched to the general population was not made clear.)

Similarly, Simon and Altstein (1991), using the same Rosenberg Self-Esteem scale in their U.S. study of inter-country adoptions, also found that adoptees scored slightly lower than their non-adopted siblings. Furthermore, adoptees were also found to have a lower sense of family integration than that of the natural children. However, this latter finding, the authors note, may be a consequence of age at placement, as the respondents were likely to be three years or older when placed.

It is important to note that the majority of research on ICA is often confounded with age, since most inter-country adoptees are older than two years when placed in their adoptive homes. Another limitation of ICA research is the scarcity of background information on the adoptee, an important issue given the potential for neglect and/or maltreatment in some overseas orphanages (Boer, Versluis-den Bieman, & Verhulst, 1994). Finally, race, and how distinct the adopted child is from other family members, may also influence the relationship, a factor not often addressed in the ICA literature.

Group placements

It is generally accepted among adoption researchers that sibling groups, when being considered for adoption, should be kept together (Jones & Niblett, 1985; Kosonen, 1996; Timberlake & Hamlin, 1982; Ward, 1987). This practice, however, creates certain challenges for adoptive parents and children alike, especially if it involves a mixed adoptive home.

> *"Much of what happens in a family adopting a sibling group has to be understood in terms of group dynamics. When two groups of children are merged, the social structure of each group is modified. Where originally there were two oldest children and two youngest children, there is now only one oldest and one youngest. Roles need redefinition."* (Ward, 1975, p. 237)

Some would argue that, instead of placing the children with first-time parents, the sibling groups are better off in families with child-rearing experience, most often gained through the raising of their own natural children (Ward, 1975, 1987). This, however, results in the creation of a larger family, a factor that used to raise some concerns among adoption professionals, who feared that children with a history of deprivation needed concentrated attention from adoptive parents. Ward (1975, 1987), on the other hand, argues that it is the other children within the larger family unit (natural or adopted) who can, and do, provide some of that nurturance.

The adoption of siblings groups is not unlike that of older children (unless it involves the adoption of infant twins), since it typically means placing biologically unrelated, non-infants into an existing family structure. Consequently, some similar patterns of adjustment can be seen. For resident children, this may involve acting-out behaviour, as well as the testing of previously established rules. For the adoptees, behaviour depends largely on their ages, and the circumstances that preceded the placement (Ward, 1975). The sibling group's adjustment may also depend on whether they were together prior to the adoptive placement, or if the children were all in separate foster homes (Melina, 1986b).

One study, involving the adoption of sibling groups from overseas, concluded that such children did not run a greater risk for behavioural problems, even when the home included natural children (Boer et al., 1994). Whether this is because of a protective factor involved with the group remaining together, or the presence of other children in the home, needs further investigation. Being from overseas may also have confounded the results, with the same limitations that face ICA research applying to this study as well.

Adopting children with developmental disabilities

Developmental disabilities within the context of adoption are defined as chronic physical and/or mental disabilities, resulting in limitations and dependency in various domains of functioning (Glidden, 1991). Regardless of whether the disability was a factor in their relinquishment, these children will usually require special attention from childhood into adulthood. It stands to reason, therefore, that the placement of these children in adoptive homes with natural children is likely to have a reciprocal impact on the children. Yet, of all the types of special needs adoptions, it is those involving children with developmental disabilities that are most often thought of as "special needs," and yet it is this population that has received the least amount of research attention.

Furthermore, research into this area is predominately theoretical, since empirical studies have focused not on the sibling interaction, but rather the overall adjustment of parents and the disabled adoptees, using rates of disruption (to be discussed in the following section) as the primary measure. In addition, many studies fail to even acknowledge the presence of other siblings in the adoptive home. In other words, the researchers do not indicate one way or another if the home has other non-adopted, or non-disabled children (e.g., Marcenko & Smith, 1991). Consequently, what is known of the sibling interaction is a conflicting picture of positive and negative outcomes.

For instance, Glidden and Pursley (1989), in their follow-up study of families who had adopted at least one developmentally disabled child, found that while the overall outcomes were predominately positive, many of the respondents (parents) reported behavioural and personality changes for the worse in children already in the home. It is not known, however, if the resident children were natural, or other adopted children; nor is it clear if they were younger or older than the disabled child. That may be because the resident children were not the focus of the study. Marx (1990), on the other hand, reporting on the overall adjustment of adoptive families with disabled children, found that the adoption had a "remarkably positive" impact on other children in the home (p. 163). Perhaps because the parents included their other resident children in the adoption decision, the disabled child did not pose a significant hardship to the families, and the sibling relationship was said to be one of acceptance, not just tolerance (Marx, 1990).

Overall, the reactions of children born into families that adopt disabled children seem to fall on a continuum from over-protective to resentful. The resentment may be due in part to the adoptee getting more attention, or it may have to do with differing standards of praise and punishment. That is, the parents may go out of their way to reward a relatively small accomplishment by the adoptee, one that would go unnoticed if done by the non-disabled child. In addition, the criteria for punishment may also differ in favour of the disabled child. On the other hand, resident children may feel quite protective of their disabled siblings, going to great lengths to include them in activities, and rejecting peers who make offensive comments about the adoptees (Melina, 1984).

One factor identified as improving the adjustment of resident children to the adoption of a disabled child is deliberate pre-placement preparation (Bowden, 1984). Reviewing the findings of a study of 20 families who adopted 23 mentally handicapped children, Bowden made a number of observations regarding the resident children in the home. For instance, when the resident teens had no prior knowledge of the handicap, they tended to be unenthusiastic and indifferent toward the child. On the other hand, families who prepared their natural children ahead of time reported no difficulties. These siblings, when asked to comment on the disabled child, rarely focused on the handicap, and often converted negative observations into positive ones. For example, "an immobile child was said to move around fast on all fours, [and when] asked to describe something the child was good at, one sibling said, 'She's good at bed-wetting.'" (Bowden, 1984, p. 42). It was also noted that the siblings involved themselves more in the adoptee's learning, and got excited over their achievements.

It should be noted that all of the disabled children in the above study where younger than the resident children. If the ages had been reversed, and the resident children had been younger than their disabled, adopted siblings, the outcomes may have been different. Unfortunately, the effect of having an older disabled sibling has received no apparent investigation, within adoptive and non-adoptive homes, as most research of this nature has looked only at children with younger disabled siblings (e.g., Harris & McHale, 1989; McHale & Pawletko, 1992). Nonetheless, it may be useful to take a brief look at the research on children with disabled siblings, outside of adoption, if only to provide a richer look at this type of sibling relationship.

Research on children with disabled siblings

It has been suggested that having a handicapped sibling creates stress for families, and in particular, for the non-handicapped older siblings within the family (Gamble & McHale, 1989). However, it may not be the disability, per se, that puts the family at risk. Rather, it may be in the way that the disability alters the family environment in a fundamental manner that affects the non-disabled children (McHale & Gamble, 1989).

For instance, the disability draws the mother's time and attention away from the non-disabled children. In addition, they are called upon more to help with not only family chores, but also caretaking roles, especially the non-disabled girls in the family. These extra responsibilities may in turn result in missed social activities outside of the home. Finally, because of the children's differing needs, the non-disabled children are likely to perceive, if not experience, differential parenting in terms of standards of punishment and praise (McHale & Pawletko, 1992). The consequence, according to McHale and Gamble (1989) may be feelings of anger, resentment, conflict, and even guilt. In their study, these feelings manifested themselves in higher rates of depression for girls, as well as lower global self-esteem scores. For boys, the result was lower levels of perceived competence (McHale & Gamble, 1989).

McHale and Harris (1992), on the other hand, concluded in a subsequent study that the impact of having a disabled sibling is much more complex than previously thought, and does not necessarily put children with disabled siblings at greater risk. Rather, it may actually provide opportunities for the development of prosocial and altruistic behaviour. The extra responsibilities may foster maturity; caregiving may teach parental roles; and the social interactions may increase intellectual development (McHale & Gamble, 1989). In fact, it has been suggested that children who are not confronted by challenges during their childhood may be at greater risk for adjustment problems as adults (McHale & Gamble, 1989). However, it is the non-disabled child's "subjective evaluation" of the situation that may be as important as the experience itself, and must be taken into consideration when judging the impact of having a disabled sibling (McHale & Harris, 1992, p. 97).

Adoption disruption and the resident children

Research into adoption suggests that most adoptive placements are successful (e.g., Berry & Barth, 1990). Sometimes, however, adoptions fail or are terminated before they are formally legalised. When they do, the child is removed from the home, and returned to the adoption agency. This is commonly referred to as "adoption disruption" and can be a very traumatic experience, both for the child and the family. For that reason, researchers have spent years trying to identify those risk factors involved with disrupted adoptions.

Several of the identified factors, classified as "child characteristics," are related to the special needs adoptions mentioned above. They include, for instance, the adoption of developmentally disabled children (e.g., Schmidt, Rosenthal, & Bombeck, 1988), the adoption of sibling groups (e.g., Barth, Berry, Yoshikami, Goodfield, & Carson, 1988), and the most widely implicated factor: the adoption of older children (e.g., Boneh, 1979; Kadushin & Seidl, 1971; Rosenthal, 1993). There is another factor, classified as a "home" or "family characteristic" that is of particular importance to the present paper. It is the implication that the presence of natural children in the adoptive home increases the

risk of adoption disruption (e.g., Barth & Berry, 1988; Boneh, 1979; Howe, 1997; Kadushin & Seidl, 1971). The empirical evidence, however, is conflicting.

Berry and Barth (1990), for instance, found that the rate of disruption increased from 0% to 14% with the presence of other adopted children; increasing to 27% if there were pending adoptions; and finally, raising to 32% if there were natural children in the home (p. 217). In a more recent investigation by Howe (1997), it was reported that 63.3% of the study's children with behaviour problems were from homes with biological children (p. 407). However, unlike Berry and Barth (1990), Howe found the presence of other *adopted* children to be a protective factor.

Two other studies of adoption disruption found that while the placement of sibling groups did not result in higher rates of disruption, they did when the children were placed into families with other biological children (Barth & Berry, 1991; Barth et al., 1988). It should be highlighted that the children in both studies were three years and older at their time of placement, a confounding variable that must be taken into consideration when reviewing the findings.

Finally, in a classic study of disruption factors, Boneh (1979) found that in homes with biological children, while 21% were successful, 56% of them failed (p. 8). She also found that the rate of disruption increased even more when the adoptive child assumed the role of the eldest. In other words, when the adoptee was older than the eldest resident child. Kadushin (1971), who had similar findings, also noted that the incidence of disruption was confounded with age, as many of the disrupted adoptions involved older children.

Contrary to the above findings, there are several other studies that have found no support for the assertion that the presence of biological children increases the risk of disruption. For example, Rosenthal and colleagues, in their study of special needs adoptions, found that successful adoptions tended to have more birth children in the home than did the disrupted ones (Rosenthal, Schmidt, & Conner, 1988). Their total sample, however, also included foster placements and relative adoptions, both of which are known to be more successful than traditional "stranger" adoptions (Festinger, 1990).

Festinger (1986), in her study of risk factors, compared a group of successful adoptions to a matched group of disrupted ones. She, too, found no evidence that biological children increased the risk of disruption. This was in spite of the fact that the majority of children whose adoptions failed were eleven years old when their adoption agreements were signed. (Many of the children were being fostered prior to the decision to adopt: a variable itself known to diminish disruption rates.) What was not stated, however, were the children's ages when they entered their adoptive homes.

Finally, Zwimpfer (1983), in the only New Zealand study of adoption disruption, found no correlation between disruption rates and family composition. Yet, while she repeated the assertion that being older when placed was a key factor, her study failed to indicate what percentage of her subjects were infants, and what percentage where considered "older" at their time of placement.

Despite the contradictions in the research findings on the risk of having both adoptive and biological children, one factor was consistent throughout the studies: the influence of age. Being adopted after approximately three years of age was implicated in almost every study of adoption disruption. It would be wise, therefore, not to draw any conclusions about the risk of birth children in the adoptive home without first controlling for the influence of age.

OVERALL CRITIQUE OF ADOPTION RESEARCH

In summary, there are a number of overall limitations found within adoption research that require the reader to use caution when viewing the findings herein. For instance, some adoption researchers have a tendency to use clinical samples instead of community-based populations. They may also exclude the use of control groups. While much of adoption research is prospective, there is a dearth of longitudinal research that would help explore developmental issues. In addition, older studies that are often cited in reviews, have not been updated or replicated in light of new research.

Many studies on adoption suffer a response-bias, as those willing to participate in research cannot be presumed to represent the entire adoption population. Families that have experienced a disrupted adoption, for instance, may not volunteer to participate in research that is investigating predictors of disruption. Furthermore, due to the costs involved with adopting children, many of the adoptive families being investigated will likely have a higher socio-economic status than the general population.

Adoption research is also problematic as there may be multiple confounds arising out of the different types of adoptions. For instance, ICA may be confounded by issues related to adopting older children, which may in turn be affected by any history of multiple placements. Related to this problem, the age at placement is not always noted by researchers. In light of the volume of research that has implicated age at placement as an important factor in the adjustment of adoptees, this is particularly problematic.

One final aspect that is of particular relevance to the present paper is the fact that many of the conclusions made about children in adoptive homes are based on parents' perceptions or agency ratings. They are not obtained from the children themselves.

THE NATURE OF THE SIBLING RELATIONSHIP

The research presented thus far has attempted to describe the mixed adoptive home, and highlight some of the possible influences on the sibling relationship therein. It has contributed little, however, toward describing the sibling relationship itself. Therefore, a look at the nature of sibling interactions, from outside of the adoption context, is needed. Hence, this final section will briefly review literature on sibling relationships. Next it will endeavour to summarise some of the more relevant findings from the field of behavioural genetics; in particular, the roles that genetics and environment play in the differing experiences of siblings within the family. Finally, the section will end with research on the effect of differential parenting on siblings.

THE SIBLING RELATIONSHIP

Siblings are an integral part of most children's lives. According to Dunn (1983, 1985), 80% of children in the U.S. and Britain grow up with at least one sibling. Some very young children may spend as much time with their siblings as they do with their mothers, and even more time than with their fathers (Abramovitch, Pepler, & Corter, 1982). Furthermore, many aspects of the sibling relationship are unique not only for their frequency, but their stability over time (e.g., Abramovitch, Corter, Pepler, & Stanhope, 1986; Stillwell & Dunn, 1985).

Siblings act as playmates and companions, as well as models and caretakers (Furman & Buhrmester, 1985). In other words, their relationships are both reciprocal and complementary (Dunn, 1983). The former state can be characterised by familiarity and intimacy; shared interests and emotional intensity. Aspects of the sibling relationship that reflect its reciprocal nature include imitative behaviour, and the affective tone of the relationship, such as cooperative or rivalrous (e.g., Bryant, 1982; Furman & Buhrmester, 1985). The latter state, on the other hand, is characterised by differing behaviours, usually due to age differences, that may still complement each other. More like that of the parent-child dyad, complementarity is seen in caregiving, teaching, and attachment behaviours (Dunn, 1983), as well as power/status interactions (Furman & Buhrmester, 1985). All of these aspects have been implicated as possibly influencing children’s development. They may, in turn, be mediated by status variables such as age and gender.

Influence of relative age and age interval on the sibling relationship

Abramovitch et al. (1982) found that older children, male and female alike, initiated most of the agonistic behaviours that occurred between siblings. They also initiated significantly more prosocial behaviour. Moreover, in the final follow-up of their longitudinal study, it was found that these particular characteristics were stable over time (Abramovitch et al., 1986). Other researchers had similar results regarding the tendency for older siblings to be both more dominant, as well as more prosocial toward their younger brothers and sisters (Furman & Buhrmester, 1985; Minnett, Vandell, & Santrock, 1983). Young children, on the other hand, engaged in more imitative behaviour, the

content of which was predominately playful in nature rather than learning new skills from their older siblings. Like the finding above, this characteristic of the sibling relationship was also reported to be stable over time (Abramovitch et al., 1986; Dunn, 1983).

Older siblings were also found by Stewart (1983), to provide reassurance and comfort to younger siblings; aspects that the researcher cited as evidence that siblings do form attachment relationships. Some researchers concur (e.g., Bank & Kahn, 1982). Others, however, question whether siblings act as a "secure base" (Bowlby, 1969) for the younger children; an aspect of the attachment relationship that requires further research (e.g., Dunn, 1983).

The age interval between siblings has also been investigated, with conflicting results. For instance, Abramovitch et al. (1986) noted that "conventional wisdom" posits that siblings close in age will have more problems and greater conflict than those with larger intervals. Their study, however, found no support for this notion. Furman and Buhrmester (1985), on the other hand, did find that quarrelling and conflict were greatest in dyads that were close in age (less than four years apart). In addition, Minnett and colleagues also concluded that aggression was more common in closely spaced siblings (less than three or four years apart), whereas positive behaviours such as praising were more common in widely spaced dyads (Minnett et al., 1983). It should be noted that the children in the studies by Abramovitch et al. (1986) and Minnett et al. (1983) were from seven to nine years of age, whereas those in Furman and Buhrmester's study (1985) ranged in age from 11 to 13 years.

A final aspect of the sibling relationship that might be mediated by age is a lack of mutuality in the behaviours that siblings direct toward each other (Rowe & Plomin, 1981). For instance, the most common pattern of asymmetry is for older children to behave in aggressive or agonistic manners, while the younger children behave in a friendly way (Dunn, 1983, 1991). This affective mismatch may be an example of why children raised together in the same home often describe vastly different experiences from each other; an aspect of the sibling relationship to be discussed in the following section on behavioural genetics (Rowe & Plomin, 1981).

<u>Influence of gender on sibling interactions</u>

The influence of gender can be seen not only in how behaviour differs between girls and boys, but also in the manner of interactions between same- and mixed-sex dyads. For instance, using a classroom setting to observe the interactions of siblings, Minnett et al. (1983) found that girls acted as teachers to younger siblings more often than did boys, who were more likely to engage in neutral behaviours, such as talking or playing together.

In addition, the interactions between young girls in same-sex dyads (three to six years of age) were characterised as more prosocial than agonistic, whereas the opposite was found to be true for

same-aged boys (Abramovitch et al., 1982). This, however, was not a stable aspect, as no sex differences were found by Abramovitch et al. (1986) in their final follow-up study. Finally, Furman and Buhrmester (1985) found higher levels of warmth and closeness, intimacy, prosocial behaviour, and companionship between same-sex dyads. However, the researchers did not distinguish between male and female dyads.

In sum, status variables appear to play a role in mediating aspects of the sibling relationship, however, researchers agree that they do not determine the relationship (e.g., Dunn, 1983; Furman & Buhrmester, 1985). Many other factors are involved. Furthermore, much of the past research on siblings and their development, has been done through comparison of children from different families. Yet the fact remains: even siblings brought up in the same family (including biologically-related ones) have been found to be as different from one another as are unrelated children raised in separate families (Daniels & Plomin, 1985; Scarr & Grajek, 1982). To explain this phenomenon, researchers have turned to the field of behavioural genetics.

FINDINGS FROM BEHAVIOURAL GENETICS

How is it that two children who share not only the same genetic make-up, but also the same family environment, can turn out to be so different from one another? That is the question that has propelled the field of behavioural genetics forward. The variables once thought to be so important to development, such as biology and shared environment, can no longer by themselves explain the differing experiences of siblings (Dunn & Stocker, 1989). Thus, researchers began to search for what would explain the fact that children from the same home frequently have not only different experiences, but also very different personalities. What they found was that biology does not operate independent of the environment, but rather interacts with it (Daniels, Dunn, Furstenberg, & Plomin, 1985). In simplistic terms, biology provides a foundation that the environment potentiates. The environment, in turn, is acted on based on one's biology. This, however, is only the beginning, as it does not yet explain why siblings are so different.

Non-shared environments

The environment, usually portrayed as a combination of factors such as social class, parents' education, living arrangements, child-rearing styles, etc., was traditionally assumed to be the same for all of the children in the family (Reiss et al., 1993). Moreover, parental interaction with one child was often generalised to all of the other children in the home. Consequently, "environment" was seen as homogenous and shared by all children. Yet researchers now know that, while there are shared elements, differing experiences are more the result of "non-shared" elements, and it is those non-shared "environmental influences [that] make two children in the same family as different from one another as are pairs of children selected randomly from the population" (Plomin & Daniels, 1987, p. 1).

Studying adoptive families is one way in which behavioural geneticists have assessed the influence of shared versus non-shared environments (e.g., Scarr, Webber, Weinberg, & Wittig, 1981). For instance, if information is collected on one or both of the birth parents, genetic influence on the adoptive child can be investigated in the absence of the environmental factors arising out of parenting. Conversely, in adoptive homes in which there are both natural and adoptive children, researchers have been able to control for genetic influences, and isolate environmental factors which may account for individual differences between siblings (Loehlin, Willerman, & Horn, 1987).

It is the latter methodological feature that is of particular relevance to the present study. From it, researchers have identified a range of non-shared experiences that help to explain why siblings are so different from each other. They include: differences in experiences from outside of the home (e.g.: peers, teachers, etc.); chance events such as an illnesses that affects only one child; differences in each child's experience of the sibling relationship itself (such as the mismatched affect described in the previous section); and differential parenting. It is the latter source that will be considered further.

Differential parental treatment

There is an accumulation of evidence that the quality of the relationship that siblings have with each other is associated with the quality of the relationships they have with their parents, and that more negative sibling relationships are found in families where there is greater differential parental treatment (DPT). This link has been reported for school-age children (Brody, Stoneman, & Burke, 1987; Bryant & Crockenberg, 1980) as well as for preschool-aged children (Dunn, 1988). Furthermore, the association has also been found in other family contexts such as homes with disabled children (McHale & Pawletko, 1992) and stepfamilies (Eno, 1985; Hetherington, 1988).

Because much of the aforementioned research has focused primarily on the mother-child dyad, with little known of the father-child dyad, more recent investigations of the influence of DPT have differentiated between mothers and fathers. For instance, Sheehan and Noller (1998) found that adolescents perceived their mothers to provide affection and support, whereas fathers were seen as more involved with the discipline and control of siblings. Consequently, research has shown that the influence of the mother-child relationship on siblings is different from that of the father-child relationship (Brody, Stoneman, & Gauger, 1996; Brody, Stoneman, & McCoy, 1992; Collins & Russell, 1991).

In addition to the differences arising from within the parental unit, there are other factors that influence the link between DPT and sibling relationships, for example: the perceptions of the siblings themselves, and the genetic influence on parenting.

Perceptions by siblings of differential parental treatment

Researchers are discovering that the way in which siblings perceive the DPT may be as important as the parental treatment itself. For instance, Kowal and Kramer (1997) reported that the majority of children in their study (the average age of which was 11 to 13 years) who acknowledged that differential parenting did occur, did not find it to be "unfair," and in fact, reported that in some circumstances differential treatment was expected. It has also been suggested that children may evaluate different forms of parental treatment in different ways; distinguishing between, for example, discipline and mother-child activities (McHale, Crouter, McGuire, & Updegraff, 1995; McHale & Pawletko, 1992).

DPT that is construed by children as "legitimate," and based on the differing developmental needs of siblings, may not have the same consequences as treatment by parents that is perceived as "one-sided" and unfair (Sheehan, 1997). It is this latter aspect, denoted by some researchers as "favouritism," which is more likely than undifferentiated DPT to account for the negative sibling relationships reported above, and which often results in high levels of conflict and hostility between siblings (e.g., Brody et al., 1992; Hetherington & Jodl, 1994; McHale et al., 1995).

Genetic influence on parenting

This final section addresses the issue of DPT of children by parents who are biologically related to their offspring, and parents who lack that genetic link. Although little research exists on this topic, one study reported that, on measures of consistency, adoptive mothers who were not biologically related to their children, showed less consistent parenting than those who were genetically related to their children (Dunn, Plomin, & Daniels, 1986). In other words, compared with the mother-child participants who were biologically related, the interactions observed between adoptive mothers and their first adopted children at the age of 24 months were different to the interactions observed between those same mothers and their second adopted children at 24 months old. The average age interval between siblings was 35 months.

Further evidence can be found within studies on stepfamilies. Mekos and colleagues, for example, found that within remarried families, stepmothers exhibited more differential negativity toward the husband's children, and both parents showed more differential warmth and monitoring toward the stepchildren (Mekos, Hetherington, & Reiss, 1996). Other studies on stepfamilies have also shown that stepfathers in particular, invest less time and energy in their stepchildren, perhaps because they feel less responsible (e.g., Hetherington & Clingempeel, 1992).

Hence, one might expect adoptive parents and non-adoptive parents to raise their children differently. If so, this matter is of particular relevance to the adoptive parents who are raising both biological and non-biological children together in the same home. Nonetheless, while behavioural

geneticists have attempted to explain why siblings raised together in the same home (even biologically related siblings), are so different from one another, they fail to adequately describe the relationship *between* siblings.

CONCLUSIONS

In conclusion, there appear to be a number of factors that may potentially affect the sibling relationship in the mixed adoptive home. The unfortunate lack of empirical research requires one to extrapolate information from a variety of fields of research, in an attempt to describe those factors. This paper has attempted to synthesise that material, and bring the reader a little closer to understanding the possible relationship between siblings in the mixed adoptive home, when one is adopted, and the other is born, into the family.

REFERENCES

Abramovitch, R., Corter, C., Pepler, D., & Stanhope, L. (1986). Sibling and peer interaction: A final follow-up and a comparison. Child Development, 57, 217-229.

Abramovitch, R., Pepler, D., & Corter, C. (1982). Patterns of sibling interaction among preschool-age children. In M. Lamb & B. Sutton-Smith (Eds.). Sibling Relationships: Their Nature and Significance Across the Lifespan. Hillsdale, NJ: Lawrence Erlbaum Assoc.

Altstein, H., Coster, M., First-Hartling, L., Ford, C., Glasoe, B., Hairston, S., Kasoff, J., & Wellborn-Grier, A. (1994). Clinical observations of adult inter-country adoptees and their adoptive parents. Child Welfare, 73(3), 261-269.

Axness, M. (1996). Growing up adopted: An inquiry into limitations, interpretations, and implications of The Search Institute's 1994 adoptive family study. Decree, 13(4), 1-12.

Bank, S. & Kahn, M. (1982). The Sibling Bond. New York: Basic Books, Inc.

Barth, R. & Berry, M. (1988). Adoption and Disruption: Rates, Risks, and Responses. New York: Aldine De Gruyter.

Barth, R. & Berry, M. (1991). Preventing adoption disruption. Prevention in Human Services, 9(1), 205-222.

Barth, R., Berry, M., Yoshikami, R., Goodfield, R., & Carson, M. (1988). Predicting adoption disruption. Social Work, 33(3), 227-233.

Benson, P., Sharma, A., & Roehlkepartain, E. (1994). Growing Up Adopted: A Portrait of Adolescents and Their Families. Minneapolis, MN: Search Institute.

Bernstein, A. (1997). Stepfamilies from siblings' perspectives. Marriage and Family Review, 26(1-2), 153-175.

Berry, M. & Barth, R. (1990). A study of disrupted adoptive placements of adolescents. Child Welfare, 69(3), 209-225.

Boer, F., Versluis-den Bieman, H., & Verhulst, F. (1994). International adoption of children with siblings: Behavioral outcomes. American Journal of Orthopsychiatry, 64(2), 252-262.

Boneh, C. (1979). Disruptions in adoptive placements: A research study. Boston, MA: Department of Public Welfare, Office of Research Evaluation.

Borgman, R. (1982). The consequences of open and closed adoption for older children. Child Welfare, 61(4), 217-226.

Bowden, L. (1984). Adoption of mentally handicapped children. Adoption and Fostering, 8(1), 38-43.

Bowlby, J. (1969). Attachment and loss (Vol 1). London: Hogarth.

Brinich, P. (1990). Adoption from the inside out: A psychoanalytic perspective. In D. Brodzinsky & M. Schechter (Eds.). The Psychology of Adoption. New York: Oxford University Press.

Brody, G., Stoneman, Z., & Burke, M. (1987). Child temperaments, maternal differential behavior, and sibling relationships. Developmental Psychology, 23(3), 354-362.

Brody, G., Stoneman, Z., & Gauger, K. (1996). Parent-child relationships, family problem-solving behavior, and sibling relationship quality: The moderating role of sibling temperaments. Child Development, 67, 1289-1300.

Brody, G., Stoneman, Z., & McCoy, J. (1992). Associations of maternal and paternal direct and differential behavior with sibling relationships: Contemporaneous and longitudinal analyses. Child Development, 63, 82-92.

Brodzinsky, D. & Brodzinsky, A. (1992). The impact of family structure on the adjustment of adopted children. Child Welfare, 71(1), 69-76.

Brodzinsky, D., Schechter, D., & Brodzinsky, A. (1986). Children's knowledge of adoption: Developmental changes and implication for adjustment. In R. Ashmore & D. Brodzinsky (Eds.). Thinking About the Family: Views of Parents and Children. Hillsdale, NJ: Lawrence Erlbaum Assoc.

Bryant, B. (1982). Sibling relationships in middle childhood. In M. Lamb & B. Sutton-Smith (Eds.). Sibling Relationships: Their Nature and Significance Across the Lifespan. Hillsdale, NJ: Lawrence Erlbaum Assoc.

Cohen, J. & Westhues, A. (1995). A comparison of self-esteem, school achievement, and friends between inter-country adoptees and their siblings. Early Child Development and Care, 106, 205-224.

Cole, E. (1985). Adoption: History, policy, and program. In J. Laird & A. Hartman (Eds.). A Handbook of Child Welfare: Context, Knowledge, and Practice. New York: The Free Press.

Collins, W. & Russell, G. (1991). Mother-child and father-child relationships in middle childhood and adolescence: A developmental analysis. Developmental Review, 11, 99-136.

Daniels, D., Dunn, J., Furstenberg, F., & Plomin, R. (1985). Environmental differences within the family and adjustment differences within pairs of adolescent siblings. Child Development, 56, 764-774.

Daniels, D. & Plomin, R. (1985). Differential experience of siblings in the same family. Developmental Psychology, 21(5), 747-760.

Deacon, S. (1997). Inter-country adoption and the family life cycle. The American Journal of Family Therapy, 25(3), 245-260.

Deykin, E., Patti, P., & Ryan, J. (1988). Fathers of adopted children: A study of the impact of child surrender on birthfathers. American Journal of Orthopsychiatry, 58(2), 240-248.

Dunn, J. (1983). Sibling relationships in early childhood. Child Development, 54, 787-811.

Dunn, J. (1985). The arrival of a sibling. In A. Nicol (Ed.). Longitudinal Studies in Child Psychology and Psychiatry. New York: John Wiley and Sons Ltd.

Dunn, J. (1988). Connections between relationships: Implications of research on mothers and siblings. In R. Hinde & J. Stevenson-Hinde (Eds.). Relationships within Families: Mutual Influences. Oxford: Clarendon Press.

Dunn, J., Plomin, R., & Daniels, D. (1986). Consistency and change in mothers' behavior toward young siblings. Child Development, 57, 348-356.

Dunn, J. & Stocker, C. (1989). The significance of differences in siblings' experiences within the family. In K. Kreppner & R. Lerner (Eds.). Family Systems and Life Span Development. Hillsdale, NJ: Erlbaum.

Eno, M. (1985). Sibling relationships in families of divorce. Journal of Psychotherapy and the Family, 1(3), 139-156.

Feigelman, W. & Silverman, A. (1979). Preferential adoption: A new mode of family formation. Social Casework, 60, 296-305.

Festinger, T. (1986). Necessary Risk: A Study of Adoptions and Disrupted Adoptive Placements. Washington DC: Child Welfare League of America, Inc.

Festinger, T. (1990). Adoption disruption: Rates and correlates. In D. Brodzinsky & M. Schechter (Eds.). The Psychology of Adoption. New York: Oxford University Press.

Furman, W. & Buhrmester, D. (1985). Children's perceptions of the qualities of sibling relationships. Child Development, 56, 448-461.

Gamble, W. & McHale, S. (1989). Coping with stress in sibling relationships: A comparison of children with disabled and non-disabled siblings. Journal of Applied Developmental Psychology, 10, 353-373.

Ganong, L. & Coleman, M. (1993). An exploratory study of stepsibling subsystems. Journal of Divorce and Remarriage, 19(3-4), 125-141.

Glidden, L. (1991). Adopted children with developmental disabilities: Post-placement family functioning. Children and Youth Services Review, 13(5-6), 363-377.

Glidden, L. (1994). Not under my heart, but in it: Families by adoption. In J. Blacher (Ed.). When there's no place like home: options for children living apart from their natural families. Baltimore, MD: Paul H. Brooks.

Glidden, L. & Pursley, J. (1989). Longitudinal comparisons of families who have adopted children with mental retardation. American Journal of Mental Retardation, 94, 272-277.

Grotevant, H., McRoy, R., Elde, C., & Fravel, D. (1994). Adoptive family system dynamics: Variations by level of openness in the adoption. Family Process, 33, 125-146.

Harris, V. & McHale, S. (1989). Family life problems, daily caregiving activities, and the psychological well-being of mothers of mentally retarded children. American Journal of Mental Retardation, 94(3), 231-239.

Hetherington, E. (1988). Parents, children, and siblings: Six years after divorce. In R. Hinde & J. Stevenson-Hinde (Eds.). Relationships within Families: Mutual Influences. Oxford: Clarendon Press.

Hetherington, E. & Jodl, K. (1994). Stepfamilies as settings for child development. In A. Booth & J. Dunn (Eds.). Stepfamilies: Who benefits? Who does not? Hillsdale, NJ: L. Erlbaum.

Hetherington, E. M. & Clingempeel, W. G. (1992). Coping with marital transitions. Monographs of the Society for Research in Child Development, 57(2-3), 1-242.

Hobart, C. (1989). Experiences of remarried families. Journal of Divorce, 13(2), 121-144.

Hoksbergen, R. (1997). Foreign adoptive children will often encounter attachment problems. In K. Sprengers (Ed.). Adoption and Healing: Proceedings of *The International Conference on Adoption and Healing*, Wellington, Aotearoa New Zealand, 1997. Wellington: New Zealand Adoption Education & Healing Trust.

Hoopes, J. (1982). Prediction in Child Development: A Longitudinal Study of Adoptive and Non-adoptive Families. New York: Child Welfare League of America, Inc.

Howe, D. (1997). Parent-reported problems in 211 adopted children: Some risk and protective factors. Journal of Child Psychology and Psychiatry, 38(4), 401-411.

Jacobs, T. (1988). On having an adopted sibling: Some psychoanalytic observations. International Review of the Psycho-Analysis, 15(1), 25-35.

Jones, M. & Niblett, R. (1985). To split or not to split: The placement of siblings. Adoption and Fostering, 9(2), 26-29.

Kadushin, A. & Seidl, F. (1971). Adoption failure: A social work postmortem. Social Work, 16, 32-38.

Kaye, K. (1990). Acknowledgement or rejection of differences? In D. Brodzinsky & M. Schechter (Eds.). The Psychology of Adoption. New York: Oxford University Press.

Kirk, D. (1984). Shared Fate: A theory and method of adoptive relationships. Port Angeles, WA: Ben-Simon Publications.

Kosonen, M. (1996). Maintaining sibling relationships: Neglected dimension in child care practice. British Journal of Social Work, 26, 809-822.

Kowal, A. & Kramer, L. (1997). Children's understanding of parental differential treatment. Child Development, 68(1), 113-126.

Kraus, J. (1987). Family structure as a factor in the adjustment of adopted children. British Journal of Social Work, 8(3), 327-337.

Lahey, B., Hammer, D., Crumrine, P., & Forehand, R. (1980). Birth order x sex interactions in child behavior problems. Developmental Psychology, 16(6), 608-615.

Loehlin, J., Willerman, L., & Horn, J. (1987). Personality resemblance in adoptive families: A 10-year follow-up. Journal of Personality and Social Psychology, 53(5), 961-969.

Marcenko, M. & Smith, L. (1991). Post-adoption needs of families adopting children with developmental disabilities. Children and Youth Services Review, 13(5-6), 413-424.

Marx, J. (1990). Better me than somebody else: Families reflect on their adoption of developmentally disabled children. In L. M. Glidden (Ed.). Formed families: Adoption of children with handicaps. New York: Haworth.

McHale, S., Crouter, A., McGuire, S., & Updegraff, K. (1995). Congruence between mothers' and fathers' differential treatment of siblings: Links with family relations and children's well-being. Child Development, 66, 116-128.

McHale, S. & Gamble, W. (1989). Sibling relationships of children with disabled and non-disabled brothers and sisters. Developmental Psychology, 25(3), 421-429.

McHale, S. & Harris, V. (1992). Children's experiences with disabled and non-disabled siblings: Links with personal adjustment and relationship evaluations. In F. Boer & J. Dunn (Eds.). Children's Sibling Relationships: Developmental and Clinical Issues. Hillsdale, NJ: Lawrence Erlbaum Associates, Publishers.

McHale, S. & Pawletko, T. (1992). Differential treatment of siblings in two family contexts. Child Development, 63, 68-81.

Mekos, D., Hetherington, E., & Reiss, D. (1996). Sibling differences in problem behavior and parental treatment in non-divorced and remarried families. Child Development, 67, 2148-2165.

Melina, L. (1983). Kids already in home react to new sibling. Adopted Child, 2(11), 2-3.

Melina, L. (1984). Children may resent, protect handicapped siblings. Adopted Child, 3(4), 2-4.

Melina, L. (1986b). Raising Adopted Children: A manual for adoptive parents. New York: Harper Perennial.

Minnett, A., Vandell, D., & Santrock, J. (1983). The effects of sibling status on sibling interaction: Influence of birth order, age spacing, sex of child, and sex of sibling. Child Development, 54, 1064-1072.

Nix, H. (1983). Sibling relationships in older child adoptions. Adoption and Fostering, 7(2), 22-28.

O'Hara, G. (1991). Placing children with special needs for adoption. In E. Hibbs (Ed.). Adoption: International Perspectives. Madison, CT: International Universities Press.

Plomin, R. & Daniels, D. (1987). Why are children in the same family so different from one another? Behavioral and Brain Sciences, 10, 1-16.

Reiss, D., Plomin, R., Hetherington, E., Howe, G., Rovine, M., Tryon, A., & Hagan, M. (1993). The separate worlds of teenage siblings: An introduction to the study of the non-shared environment and adolescent development. In E. Hetherington, D. Reiss, & R. Plomin (Eds.). Separate Social Worlds of Siblings: Impact of the Non-shared Environment on Development. Hillsdale, NJ: Lawrence Erlbaum Associates.

Reitz, M. & Watson, K. (1992). Adoption and the family system: Strategies for treatment. New York: The Guilford Press.

Rosenberg, E. (1989). Growing Up Adopted. New York: Bradbury Press.

Rosenthal, J. (1993). Outcomes of adoption of children with special needs. The Future of Children: Adoption, 3(1), 77-88.

Rosenthal, J., Schmidt, D., & Conner, J. (1988). Predictors of special needs adoption disruption: An exploratory study. Children and Youth Services Review, 10, 101-117.

Rowe, D. & Plomin, R. (1981). The importance of nonshared environmental influences in behavioral development. Developmental Psychology, 17(5), 517-531.

Salo, F. (1990). "Well, I couldn't say no, could I": Difficulties in the path of late adoption. Journal of Child Psychotherapy, 16(1), 75-91.

Scarr, S. & Grajek, S. (1982). Similarities and differences among siblings. In M. Lamb & B.Sutton-Smith (Eds.). Sibling Relationships: Their Nature and Significance Across the Lifespan. Hillsdale, NJ: Lawrence Erlbaum Assoc.

Scarr, S., Webber, P., Weinberg, R., & Wittig, M. (1981). Personality resemblance among adolescents and their parents in biologically related and adoptive families. Journal of Personality and Social Psychology, 40(5), 885-898.

Schmidt, D., Rosenthal, J., & Bombeck, B. (1988). Parents' views of adoption disruption. Children and Youth Services Review, 10, 119-130.

Sheehan, G. (1997). Adolescent sibling conflict: The role of parental favouritism. Family Matters, 46, 37-39.

Sheehan, G. & Noller, P. (1988). Adolescents' perceptions of parental favouritism: Links with family functioning. Family Matters, 49, 17-19.

Silverman, A. (1993). Outcomes of transracial adoption. The Future of Children: Adoption, 3(1), 104-118.

Simon, R. & Altstein, H. (1991). Inter-country adoptions: Experiences of families in the United States. In H. Altstein & R. Simon (Eds.). Inter-country Adoption: A Multinational Perspective. New York: Praeger.

Solinger, R. (1992). Wake Up Little Suzie: Single Pregnancy and Race Before Roe V. Wade. New York: Routledge.

Stewart, R. (1983). Sibling attachment relationships: Child-infant interactions in the strange situation. Developmental Psychology, 19(2), 192-199.

Stillwell, R. & Dunn, J. (1985). Continuities in sibling relationships: Patterns of aggression and friendliness. Journal of Child Psychology and Psychiatry, 26(4), 627-637.

Sutton-Smith, B. (1982). Birth order and sibling status effects. In M. Lamb & B. Sutton-Smith (Eds.). Sibling Relationships: Their Nature and Significance Across the Lifespan. Hillsdale, NJ: Lawrence Erlbaum Assoc.

Talen, M. & Lehr, M. (1984). A structural and developmental analysis of symptomatic adopted children and their families. Journal of Marital and Family Therapy, 10(4), 381-391.

Ternay, M., Wilborn, B., & Day, H. (1985). Perceived child-parent relationships and child adjustment in families with both adopted and natural children. The Journal of Genetic Psychology, 146(2), 261-272.

Timberlake, E. & Hamlin, E. (1982). The sibling group: A neglected dimension of placement. Child Welfare, 61(8), 545-552.

Wallerstein, J. & Kelly, J. (1980). Surviving the Break-up: How children and parents cope with divorce. London: Grant McIntyre Limited.

Ward, M. (1975). Full house: Adoption of a large sibling group. Child Welfare, 54(3), 233-241.

Ward, M. (1987). Choosing adoptive families for large sibling groups. Child Welfare, 66(3), 259-268.

Ward, M. & Lewko, J. (1987). Adolescents in families adopting older children: Implications for service. Child Welfare, 66(6), 539-547.

Ward, M. & Lewko, J. (1988). Problems experienced by adolescents already in families that adopt older children. Adolescence, 23(89), 221-228.

Zwimpfer, D. (1983). Indicators of adoption breakdown. Social Casework, 64, 169-177.