

State of the art:

Siblings

MOST of us grow up with brothers and sisters — the figure is around 80 per cent for people in the UK and the US. And our relationships with our siblings are the longest-lasting we'll probably have — longer than those with our parents or partners, or with our children. Indeed, towards the end of the lifespan, relations between siblings take on particular importance for many people as sources of support (Cicirelli, 1996).

But how far does this relationship influence the way we develop? And why do some siblings get along so well, while others are violently hostile? And why are siblings, who grow up in the same family and share the same parents (and 50 per cent of their genes), nevertheless often strikingly different from one another in personality and adjustment?

Think of the brothers and sisters you know well (members of your own family, for example), and you're likely to be struck by their differences, as well as their similarities.

Scientific study of the psychology of siblings is relatively recent, but is fast-growing. It has opened up a series of challenges to our understanding of some basic themes in developmental psychology, raising issues well beyond the intriguing questions about sibling relationships *per se*.

The scientific interest of siblings lies in particular in three domains. One is the potential influence of sisters and brothers on each other's development and adjustment.

The second is the novel and exciting perspective that the study of siblings provides on central developmental issues — particularly the 'hot topic' of how children come to understand other people's feelings and minds. And the third is the challenge that the study of siblings has presented to those investigating how families influence development — the significance of their shared and separate family experiences and their genetic relatedness.



JUDY DUNN reveals the illuminating perspectives offered by the study of what are, for most people, their longest-lasting relationships.

I'll comment briefly on each of these three themes, and on the new directions in which sibling research is taking us.

Siblings' influence on adjustment

If you take a moment to watch young brothers and sisters — at home, in the supermarket, in the park — the distinctive emotional power of the relationship will quickly be clear to you. From infancy onwards (and most sibling research is focused on childhood and adolescence) that emotional intensity, and the intimacy of the relationship, the familiarity of children with each other, and the significance of *sharing parents* mean that the relationship has

considerable potential for affecting children's well-being.

If children grow up with someone who is continually hostile and irritable with them, who disparages them, and is endlessly superior, it shouldn't surprise us if this day-in day-out experience of hostility influences their development.

The nature of the sibling relationship — with its uninhibited, no-holds-barred expression of negative emotions in many families, and the processes of comparison between siblings — suggests it may well be important in fostering aggression, and in feelings of inadequacy and low self-esteem.

And there is the other side of the coin. Many brothers and sisters are very

affectionate, supportive and companionable, and we might expect their interactions, too, to be developmentally important for both siblings.

Whatever its emotional colour, the sibling relationship offers children unique opportunities for learning about others and themselves. But although from the early years of this century clinicians and psychologists have been interested in the part siblings might play in influencing development, there was very little systematic, rigorous research until the 1980s and 1990s (with the exception of the classic studies of birth order of Helen Koch, 1954).

Since the 1980s, however, research on siblings has flourished in the UK, the US, Canada and Europe, and has documented that individual differences in the quality of sibling relationships are striking (e.g. Boer & Dunn, 1990; Brody, 1996).

In terms of influence on adjustment, we've learned that siblings are likely to exert influence on both externalising behaviour problems, such as aggression and conduct disorder, and on internalising, such as worrying, anxious behaviour and low self-esteem.

Patterson and his colleagues, for instance, have documented that siblings reinforce each other's aggressive behaviour by fighting back, teasing and escalating conflict. They have found this in both community samples and clinical samples of aggressive children and children with conduct disorder (Patterson, 1986).

Longitudinal studies have followed

siblings from preschool years through to early adolescence. These have shown that internalising problems (such as anxiety) in middle childhood and early adolescence were more common in children whose siblings had been very hostile and negative towards them during the pre-school period (Dunn *et al.*, 1994b). This pattern of correlations was significant even when the mothers' current mental state was controlled for.

So, as this research shows, adjustment problems are not simply attributable to children's relationships with their parents.

A growing body of research highlights the links between sibling influence and deviant behaviour in adolescence. For instance, a longitudinal study of adolescents in rural communities in the mid-West of the US showed that frequent and problematic drinking by a sibling near in age exacerbated the tendency of adolescents to drink (Conger & Rueter, 1996).

Siblings appeared to have both a concurrent direct effect on a brother or sister's risk of becoming a heavy drinker, and a delayed, indirect effect on their alcohol use. The indirect effect comes through the influence of the siblings' friends' drinking habits.

Children and adolescents with deviant peer groups begin to draw their siblings into these groups during middle childhood and adolescence (Barnes, 1990), and younger as well as older siblings can promote one another's deviance (Lauritsen, 1993).

Of course, many of these studies involve correlational data, and this means that clear conclusions about the direction of causal influence cannot be drawn. The question of whether *indirect* effects of siblings on one another are sizeable (such as through their relations with their parents or with peer groups), as well as the processes of *direct* shaping of behaviour that Patterson documented, remains an important one.

For example, the arrival of a sibling is consistently found to be linked to increased problems for firstborn children: sleeping problems, feeding and toilet problems in young children, withdrawal, dependency and anxiety (Dunn, 1993; Stewart *et al.*, 1987) have all been reported.

These adjustment changes are correlated with parallel changes in the interaction between the 'displaced' older sibling and his or her parents. There's a notable *increase* in critical, negative behaviour from mothers to children, an *increase* in demanding, difficult behaviour by the firstborn, and a *decrease* in happy joint

CLAIRE PETHERICK

activities shared by parents and firstborn (Dunn & Kendrick, 1982).

This raises the question of how sibling relationships, and the adjustment problems associated with them, are linked to the quality of parents' relationships with each of their children. For example, is 'differential parenting' (in which more attention, affection and less punishment is shown by a parent towards one sibling than another) implicated in children's adjustment problems?

Links between sibling, parent-child and marital relationships
The answer to this last question is clear. Differential parent-child relationships are linked with more conflicted, hostile sibling relationships, and with higher levels of aggression, difficult behaviour and conduct disorder in the 'unfavoured' sibling (Brody & Stoneman, 1996; Hetherington *et al.*, 1994). The pattern is particularly clear for families under stress, such as those who have recently experienced parental separation, and those with sick children or children with disabilities.

Again we are faced with the fact that the data in these studies are correlational, and we cannot come to firm conclusions about the direction of effects.

If one child is more aggressive and difficult than his or her sibling, this may *lead to* the differences in the parents' relations with the siblings. Alternatively, the differential treatment may contribute to the externalising behaviour. It seems most likely that both processes are in action, and that there are bi-directional effects.

What is unquestionable is that differential treatment is associated with adjustment problems, and that from very early in childhood children are particularly sensitive to such treatment. They monitor

their parents' behaviour to their siblings with vigilance (Kowal & Kramer, 1997).

Children respond very quickly to any sign of the parents showing affection or attention to the sibling — sometimes by drawing attention to themselves (often with deliberately naughty actions) or by inserting themselves between parent and sibling — literally!

There is much more debate and inconsistency in the research results on the question of how far and in what ways parent-child relationships may influence sibling relationships. Is the security of children's attachment to their parents related to later sibling relationship quality, for instance?

Yes, according to some studies; these show that warm, positive relations between child and parent are linked to friendly sibling relationships (Brody & Stoneman, 1996). But again there is the difficulty of drawing conclusions about the direction of causal influence from correlational studies.

And there are some findings that fit better with a 'compensatory' model, in which intense supportive sibling relationships are found in families in which the parents are distant and uninvolved with

their children (e.g. Stocker, 1994). This pattern is reported for families at the extremes of stress and relationship difficulties (Bank *et al.*, 1996), and may well be less characteristic of other, less stressed, families.

What are the processes or mechanisms involved in the links between parent-child and sibling relationships? It is likely that the connections between the relationships operate at varied and different levels.

For example, the research on the impact of the arrival of a new sibling on young children shows that several different processes are involved in the links between the mother-firstborn relationship and the interaction between the young siblings.

These processes range from general emotional disturbance (a child who is very upset after the birth of a sibling is difficult with her or his mother *and* sibling, father, grandmother, for instance), through processes of increasing specificity and cognitive complexity.

There is, for instance, evidence that in families in which mothers talk to their firstborn about the needs and feelings of the baby in the early months, both children over time show more friendliness towards

one another (Dunn & Kendrick, 1982; Howe & Ross, 1990).

This evidence for the significance of children's participation in conversations about feelings suggests that even young children are comparing themselves with their siblings, and are reflecting on their feelings for their siblings.

A notably timorous two-year-old in one of our studies commented mournfully on his mother's warmly expressed praise for his younger sister ('Oh Susie you *are* a determined little devil!') with the remark '*I'm* not a determined little devil', to which his mother replied 'No, what are you? A poor old boy!' And a three-year-old remarked '*I hate Annie!*' (his sister), to his mother's consternation. Such processes of attribution and reflection may be implicated in the quality of the relationship that develops between the siblings.

How well parents are getting along with each other is also linked to the siblings' relationship. Hostile, conflicted relations between parents are reported in several studies to be associated with negative relationships between brothers and sisters. But there is some dispute about the nature of these associations.

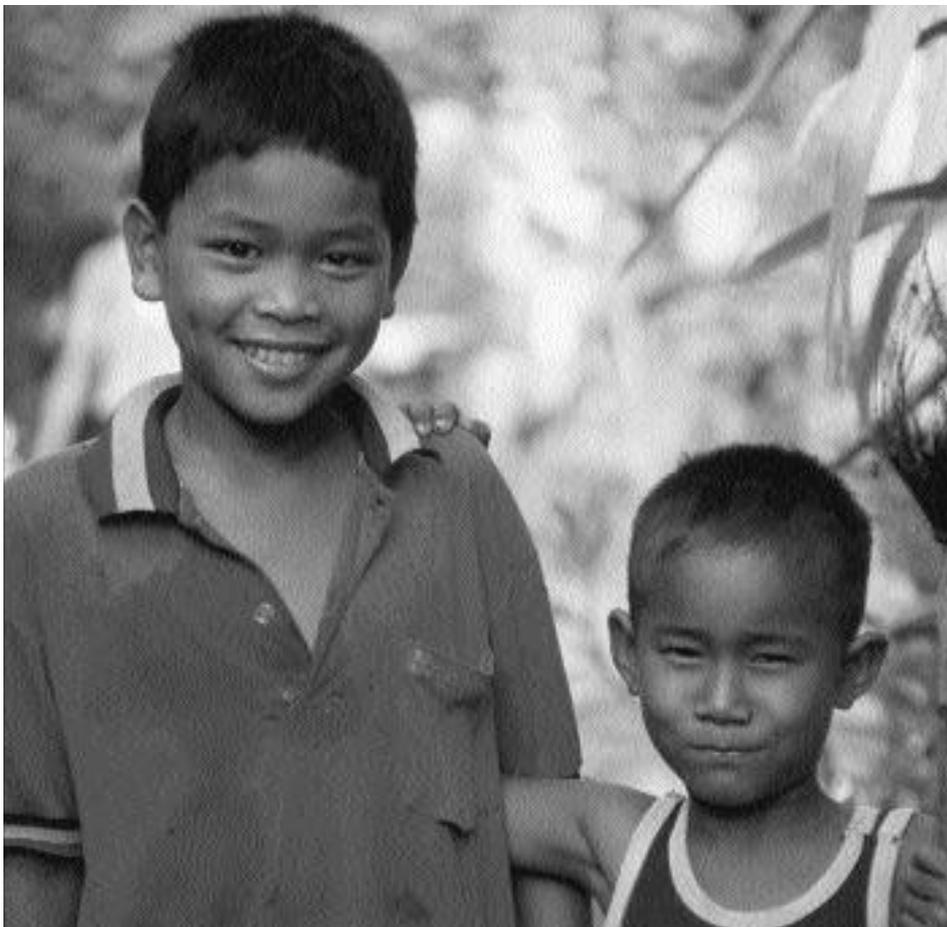
Does quarrelling and conflict between parents impact directly on the relations between siblings — for instance, by modelling behaviour that the children then copy?

Or are the associations explained by the quality of the parent-child relationship, rather than by direct effects? We know that in families in which there is much marital conflict, the parents are likely to have more difficult relationships with their children. So are the links between marital and sibling relations mediated by what happens between parent and child?

Despite some disagreement about these patterns of links, there is now evidence for both direct pathways and indirect ones via parent-child relationships. For instance, 'indirect' pathways are illustrated by the research showing connections between interparental conflict and unresponsive parenting (Gottman & Katz, 1989) and inconsistent discipline (Emery, 1982).

In terms of direct pathways, evidence has accumulated that the experience of witnessing conflict between parents causes distress and disturbance in young children. This has been clearly shown in experimental settings (Grych & Fincham, *in press*; Cummings & Davies, 1994).

Before leaving the topic of siblings and adjustment, we should note that siblings can be a valuable source of support in



times of stress, and can act as therapists for siblings with some problems, such as eating disorders (Boer & Dunn, 1990).

There is also evidence that in the face of negative life events, their relationship can significantly improve, with increased confiding and intimacy (Dunn *et al.*, 1994a). However, this picture may not hold for the stress of parental separation, which can be followed by increased sibling conflict.

Siblings and the development of understanding

Tim, aged just two years, is playing with his four-year-old sister Carol, a game with Lego castles and animals. They get into a dispute about how the game should go, and Tim, very cross at being bossed around, goes straight off to take Carol's most precious possession, her favourite doll. He taunts her by flaunting it at her, and not letting her have it — very effective teasing that leads to her crying bitterly.

If you watch young siblings together, you'll see plenty of such incidents, with teasing that reflects some grasp of what will upset the sibling. You'll also see very effective co-operation in playing pretend games, sharing an imaginary world — an intellectual act of considerable sophistication for a two-year-old — and (sadly, rather less frequently) concern for the feelings of the other child.

Observations of siblings playing and

arguing have transformed our picture of the social understanding of young children. In the emotional drama (and the familiarity) of siblings' interactions they show powers of reading the other's feelings and intentions that are far greater than the understanding that has been attributed to children on the basis of more formal tests.

What is more, if we eavesdrop on their conversations, we hear that siblings actually talk to each other about mental states and feelings — their causes and consequences. So the study of siblings has contributed materially to our understanding of children's discovery of the mind, by offering a new perspective on their abilities (Dunn, 1999).

The study of siblings has also contributed to what we know about *individual differences* in children's understanding of feelings and other minds. These are striking, and until recently have been relatively unexplored by cognitive psychologists. What contributes to these differences in such a central domain of human development?

Experiences with siblings turn out to be closely related to these aspects of social understanding. For example, children who have engaged in frequent shared pretend play with a sibling, and talked about mental states (knowing, remembering, thinking, believing, and so on) with a sibling are, over time, especially successful on assessments of understanding emotion and mental states (Dunn, 1995; Dunn, 1999).

Again, from these correlational studies, we cannot be sure of the direction of effects. The children who are good at

understanding emotion and other minds are more effective play companions. Thus their early sophistication in reading minds and feelings may contribute to the development of shared imaginative play with their siblings, which itself fosters further developments in understanding others' inner states.

But one general lesson from these sibling studies is that social processes are likely to play a significant role in shaping the remarkable individual differences in what children understand about others. These differences are linked to children's moral sensibility and adjustment to school, as well as to relationships with others.

Challenges to ideas on family influence

The third theme in recent sibling research with general implications for psychology emerged, perhaps surprisingly, from behavioural genetics studies. These studies documented that siblings growing up within the same family differ notably in personality, adjustment and psychopathology (Dunn & Plomin, 1990).

The researchers pointed out that such differences challenge conventional views of the nature of family influence. The features of family life that we have thought to be important — such as mothers' well-being, the educational level of parents, the neighbourhood in which the family lives — are apparently *shared* by siblings, who nevertheless turn out to be so different from one another. How can this be?

The answer, established by extensive studies by behaviour geneticists in collaboration with developmental psychologists, is that the sources of environmental influence that make individuals different from one another work *within* rather than *between* families.

The message is not that family influence is unimportant, but that we need to investigate those experiences that are specific to each child within the family. Recall the evidence that children monitor with vigilance what happens between their parents and their siblings, and that differential parent-child relationships are linked to children's adjustment.

These developmental studies are helping to clarify how experiences within the 'same' (physically but not psychologically) family are likely to influence the development of differences between siblings. For instance, in a family in which the father had to leave home to find work elsewhere, the older sibling,

very attached to his father, was much more upset by this family change than his younger sister, who was less intensely attached to the father.

Future directions

It is clear that if we include siblings in our studies of individual development and of families — rather than focusing solely on one child per family — we gain enormously in our understanding of the salient influences on children's development and adjustment.

But it is still the case that there are major gaps in the research on siblings. Most studies are of children or adolescents, rather than adults, and information on siblings from minority communities or from non-Western cultures is lacking. This is so even though we know from ethnographic work that siblings play a central role in adults' lives in many other cultures, and act as caregivers for their siblings from very early ages (e.g. Nuckolls, 1993).

Beyond the developmental issues considered here, there is growing interest in siblings in the clinical literature. For instance, in the effects of children's

response to illness, disability or injury in their siblings (Stallard *et al.*, 1997) and of traumatic experiences on siblings (Newman *et al.*, 1997).

And an exciting new direction that is attracting interest is investigation of the relationships of step- and half-siblings, given the dramatic increases in the numbers of families that do not conform to the idea of the 'traditional' biological family (Hetherington *et al.*, in press).

Comparing full, half- and step-siblings

also provides a useful tool for discovering the role of genetics in the development of individual differences. Sibling studies are used too as the main design these days for molecular genetics studies of complex traits, for instance in the search to find genes for reading disability, autism, and late onset Alzheimer's disease.

The study of siblings, then, is providing us with an illuminating perspective on widely differing domains of psychology — from earliest infancy to old age.

References

- Bank, L., Patterson, G.R., & Reid, J.B. (1996). Negative sibling interaction as predictors of later adjustment problems in adolescent and young adult males. In G.H. Brody (Ed.), *Sibling relationships: Their causes and consequences* (pp. 197–229). Norwood, NJ: Ablex.
- Barnes, G.M. (1990). Impact of the family on adolescent drinking patterns. In R. Collins, K. Leonard & J. Searles (Eds.), *Alcohol and the family: Research and clinical perspectives*. Hillsdale, NJ: Lawrence Erlbaum.
- Boer, F., & Dunn, J. (1990). *Children's sibling relationships: Developmental and clinical issues*. Hillsdale, NJ: Lawrence Erlbaum.
- Brody, G.H. (Ed.). (1996). *Sibling relationships: Their causes and consequences*. Norwood, NJ: Ablex.
- Brody, G.H., & Stoneman, Z. (1996). A risk-amelioration model of sibling relationships: Conceptual underpinnings and preliminary findings. In G.H. Brody (Ed.), *Sibling relationships: Their causes and consequences* (pp. 231–247). Norwood, NJ: Ablex.
- Cicirelli, V. (1996). Sibling relationships in middle and old age. In G.H. Brody (Ed.), *Sibling relationships: Their causes and consequences* (pp. 47–73). Norwood, NJ: Ablex.
- Conger, R. D., & Rueter, M.A. (1996). Siblings, parents and peers: A longitudinal study of social influences in adolescent risk for alcohol use and abuse. In G.H. Brody (Ed.), *Sibling relationships: Their causes and consequences* (pp. 1–30). Norwood, NJ: Ablex.
- Cummings, E.M., & Davies, P. (1994). *Children and marital conflict: The impact of family dispute and resolution*. New York: Guilford Press.
- Dunn, J. (1993). *Young children's close relationships: Beyond attachment* (Vol. 4). Newbury Park, CA: Sage.
- Dunn, J. (1995). Children as psychologists: The later correlates of individual differences in understanding of emotions and other minds. *Cognition and Emotion*, 9, 187–201.
- Dunn, J. (1999). Making sense of the social world: Mindreading, emotion and relationships. In P. D. Zelazo, J.W. Astington & D.R. Olson (Eds.), *Developing theories of intention: Social understanding and self control* (pp. 229–242). Mahwah, NJ: Lawrence Erlbaum.
- Dunn, J., & Kendrick, C. (1982). *Siblings: Love, envy and understanding*. London: Grant McIntyre.
- Dunn, J., & Plomin, R. (1990). *Separate lives: Why siblings are so different*. New York: Basic Books.
- Dunn, J., Slomkowski, C., & Beardsall, L. (1994a). Sibling relationships from the preschool period through middle childhood and early adolescence. *Developmental Psychology*, 30, 315–324.
- Dunn, J., Slomkowski, C., Beardsall, L., & Rende, R. (1994b). Adjustment in middle childhood and early adolescence: Links with earlier and contemporary sibling relationships. *Journal of Child Psychology and Psychiatry*, 35, 491–504.
- Emery, R.E. (1982). Interparental conflict and the children of discord and divorce. *Psychological Bulletin*, 92, 310–330.
- Gottman, J.M., & Katz, L.F. (1989). Effects of marital discord on young children's peer interaction and health. *Developmental Psychology*, 25, 373–381.
- Grych, J.H., & Fincham, F.D. (Eds.). (in press). *Child development and inter-parental conflict*. Cambridge: Cambridge University Press.
- Hetherington, E.M., Henderson, S.H., Reiss, D., Anderson, E.R., O'Connor, T., Jodl, K.M., & Skaggs, M.J. (in press). Family functioning and adolescent adjustment of siblings in nondivorced families and diverse types of stepfamilies. *Monographs of the Society for Research in Child Development*.
- Hetherington, E.M., Reiss, D., & Plomin, R. (1994). *Separate social worlds of siblings: The impact of nonshared environment on development*. Hillsdale, NJ: Lawrence Erlbaum.
- Howe, N., & Ross, H. (1990). Socialization, perspective-taking, and the sibling relationship. *Developmental Psychology*, 26, 160–165.
- Koch, H.L. (1954). The relation of 'primary mental abilities' in five- and six-year-olds to sex of child and characteristics of his sibling. *Child Development*, 15, 209–223.
- Kowal, A., & Kramer, L. (1997). Children's understanding of parental differential treatment. *Child Development*, 68, 113–126.
- Lauritsen, J.L. (1993). Sibling resemblance in juvenile delinquency: Findings from the National Youth Survey. *Criminology*, 31, 387–409.
- Newman, M., Black, D., & Harris-Hendriks, J. (1997). Victims of disaster, war, violence or homicide: Psychological effects on siblings. *Child Psychology and Psychiatry Review*, 2, 140–149.
- Nuckolls, C. (1993). *Siblings in South Asia*. New York: Guilford Press.
- Patterson, G.R. (1986). The contribution of siblings to training for fighting: A microsocial analysis. In D. Olweus, J. Block & M. Radke-Yarrow (Eds.), *Development of antisocial and prosocial behavior* (pp. 235–261). New York: Academic Press.
- Stallard, P., Mastroyannopoulou, K., Lewis, M., & Lenton, S. (1997). The siblings of children with life-threatening conditions. *Child Psychology and Psychiatry Review*, 2, 26–33.
- Stewart, R., Mobley, L., Van Tuyl, S., & Salvador, M. (1987). The firstborn's adjustment to the birth of a sibling. *Child Development*, 58, 341–355.
- Stocker, C.M. (1994). Children's perceptions of their relationships with siblings, friends and mothers: Compensatory processes and links with adjustment. *Journal of Child Psychology and Psychiatry*, 35, 1447–1459.