Even before birth, the unborn child influences the environment into which he or she will be born. In the later stages of pregnancy the mother may have to give up work, take rests during the day and even change her diet. These are significant lifestyle changes influenced by the child before birth. Once born, the child inevitably influences his or her parents' behaviour. Altered sleeping and eating patterns together with changed patterns of social interaction are all common for new parents. Similarly, the baby's own eating and sleeping patterns are influenced by his or her family. Some parents will feed on demand, for example, while others will have a more structured routine. Thus, even in the early months of life the child both affects and is affected by the immediate environment in which he or she lives.

As children grow older, their sphere of influence widens to encompass settings beyond the home. These may include playgroups, child care centres, preschools and schools. While the child's influence is felt in these settings, the settings themselves have a direct influence on the child's own behaviour and development. The two-way influence between the developing child and his or her environment is described by Garbarino and Abramowitz (1992) as reciprocal. Both the child and his or her environment are in a state of perpetual change, each depending on the other.

The theoretical framework

The reciprocal nature of the interaction between the child and his or her environment is best illustrated by Urie Bronfenbrenner's ecological model of human development. Bronfenbrenner (1979) used the concept of an ecological system to describe the inter-relationship of the developing child and his or her environment.

In Bronfenbrenner's model of human development, the ecological system comprises a set of nested structures, each situated inside the next like a set of stacking cups or Russian dolls. Each level of the system influences and is influenced by the next. Thus there is constant two-way interaction between the different components of the system which strives towards balance.

The macrosystem

The outer layer of the system, which is symbolised by the largest Russian doll in the set, relates to the dominant ideologies and cultural patterns that organise all other social institutions in any particular society. Bronfenbrenner refers to these influences as the macrosystem.

These dominant ideologies and cultural patterns influence what kind of government departments are provided to support families, how the legal system is designed, how communities organise themselves and how families bring up children. It should be remembered that the sphere of influence is two-way: not only does the macrosystem influence other components of the system, but those other components influence the macrosystem.
macrosystem. For example, in the past, beliefs and cultural patterns have influenced our understanding of what a family is. Traditionally in Australia a family was believed to be a mother, father and their children. However, since the earliest days in Australia, many families have had only one parent, and others have had parents of the same sex. Over the years these families have been able to influence the dominant view of a family, and are beginning to be recognised by other social institutions. In 1996 a Sydney judge ruled that a lesbian should pay maintenance to her estranged partner for the care of the children they had while they were living together. This was the first time that a lesbian family had been recognised by the Australian legal system. The way in which families choose to organise themselves can, over time, influence the overriding ideology or cultural pattern of any given society.

The exosystem

The next layer of the ecological system, represented by the second-largest Russian doll, relates to events that occur in settings where the child is not even present. These settings include the parents' workplaces and government institutions. For example, parents who are under constant pressure from their employer to do overtime may not have the time and emotional energy left to encourage their child's school work successfully. Those parents who constantly lobby their employer to implement family-friendly policies may achieve more flexible work hours, which enable them to spend more time with their children. Bronfenbrenner refers to this level of the system as the exosystem.

REFLECTION

How much time were your parents able to spend with you when you were 4 years old? What stopped your parents from spending more time with you? Would your childhood have been any different if your father had stayed home and looked after you? If yes, think about how it would have been different.

The microsystem

In Bronfenbrenner's ecology of human development the innermost component of the system, represented by the smallest Russian doll in the set, is the immediate setting containing the developing child. The most influential settings for many children in Australia are the home and the child care setting/school. Bronfenbrenner refers to these settings as microsystems. Recent changes in child care policy at the level of government illustrate the way in which the microsystem is influenced by other parts of the total system.

The mesosystem

The mesosystem relates to the relationships and channels of communication between the different microsystems responsible for raising the child. Bronfenbrenner uses the example of the young child learning to read to describe the importance of the mesosystem to the child's development (1979). The child's ability to learn to read is influenced not only by the competence of the teacher but also by the quality of the


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relationship between the school and the home. If the relationship and channels of communication between the school and the home are strained, the child is less likely to be encouraged to read at home and less likely do well at school.

Table I.1 describes the different components of the ecological system and the way in which they directly and indirectly influence the developing child.

### Table I.1 The ecological system

<table>
<thead>
<tr>
<th>Ecological level</th>
<th>Definition</th>
<th>Examples</th>
<th>Issues affecting infant and toddler development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microsystem</td>
<td>A setting where people engage in face-to-face interaction</td>
<td>Home, child care centre, playgroup</td>
<td>Quality of interactions</td>
</tr>
<tr>
<td>Mesosystem</td>
<td>The relations between two or more settings in which the child actively participates</td>
<td>Relations and communication between family and child care staff</td>
<td>Responsiveness of adults</td>
</tr>
<tr>
<td>Exosystem</td>
<td>One or more settings that do not involve the child but have an indirect effect on the child</td>
<td>Parents’ workplace</td>
<td>Quality of relationships</td>
</tr>
<tr>
<td></td>
<td>Blueprints for how the other components of the system should operate</td>
<td>Services available in the community</td>
<td>Respect for each other</td>
</tr>
<tr>
<td>Macrosystem</td>
<td></td>
<td></td>
<td>Support for each other</td>
</tr>
</tbody>
</table>

**Why an ecological approach to infant and toddler care?**

An ecological approach to infant and toddler programs has been adopted because it emphasises the importance of relationships and interactions in the development of


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very young children. Like young children, the ecological system is dynamic, ever-changing and developing. The ecological model facilitates the perception of infants and toddlers as active agents, shaping their environment as they interact with others. Infants and toddlers are not passive recipients of external influence. Within the child care setting each child's personality and behaviour shapes the way in which the program functions, just as the program influences the behaviour and development of each child. The acknowledgment of the importance of this two-way relationship has huge implications for practice. A program that acknowledges the child as someone who actively shapes his or her environment is very different from a program that positions the child as a passive 'sponge for learning'. The infant and toddler program that acknowledges the agency of the very young child will arrange its daily schedule around the children's individual routines. A program that denies the child's need to influence his or her environment will arrange the children's routines around an adult-imposed daily schedule.

REFLECTION
Think how you would feel if you had to get up at 7.30 after a late night out because breakfast was available only between 8 and 8.30 am? Alternatively, think about how you would feel if you had to eat lunch on a full stomach because it was served just one hour after you had eaten a special treat with your friend.

The ecological framework also enables exploration and understanding of the relationship and interrelatedness of such abstract concepts as culture and ideology to the practical realities of caring for very young children. For example, in many societies dominant ideologies about the role of women mean that men do not often take part in nappy-changing, bathing or feeding. In other societies where these beliefs do not exist, men are actively engaged in the day-to-day care of very small children. Cultural beliefs influence whether or not newborn babies are put to the breast to suckle straight after birth. In many societies the colostrum, which is produced by the mother in the first days after birth, is believed to be beneficial to the child. Hence, the child is put to the breast straight away. In other societies the colostrum is believed to be harmful to the child, and the child is not put to the breast until the second or third day.

In this way, the ecological model helps us to understand why we make decisions about which child care practices to adopt, how these child care practices should be carried out, when they should occur and who should be responsible for them. By understanding the influence of the different systems, caregivers can examine their own attitudes and make informed decisions about how best to develop their programs.

Criticisms of an ecological approach

The strength of the ecological model lies in its ability to illustrate the complex interrelationships between different levels of the child's environment and his or her development. The ecological model has, however, been criticised as being simplistic (Myers 1992). According to Myers, the image of a nest of systems is too tidy because many children experience different cultures and are subject to different belief systems at the same time. For example, the culture and values of the child care program may represent a different ideological and cultural blueprint from that of the home.

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Australia is characterised by a multitude of different groups, each with its own particular cultural scripts, values and beliefs. Thus conflict and change are constant phenomena facing those caring for very young children in group care.

Conflict can be incorporated into the ecological model, however, by acknowledging that it exists at every level of the ecosystem. Within micro systems, for example, conflict can be found between the young child's needs for both attachment and autonomy. There may be conflict between siblings needs and even between the needs of the child's parents (Scott 1992). Within the mesosystem conflict is common for many young children, who face differences in the norms of mainstream society and traditional family values. At the level of the exosystem conflict is experienced between different services and sectors as they compete for time and resources. For example, conflict can exist between the parent's workplace and the school, which insists on a parent roster for the school canteen. Conflict commonly occurs within the macrosystem in relation to racial/religious differences, class conflict, or fundamental tensions between individualistic and collectivist values (Scott 1992).

The challenge for caregivers is to acknowledge the conflicts inherent in the ecological system and develop strategies for assisting children and their families to confront and overcome these conflicts. For example, a mother and father who have different cultural backgrounds and experiences of child-rearing may find themselves in conflict over how to discipline their young children. Caregivers need to be able to understand the different cultural patterns underlying such a conflict in order to help the parents find a positive solution to their problem. Equally, caregivers themselves are often confronted with conflicts arising over different approaches to child-rearing. When caregivers understand the different cultural blueprints that are operating they are better able to bridge the divide between the two different and sometimes conflicting belief systems.

The existence of cultural conflicts in child care means that it is increasingly necessary for caregivers to draw on anthropological frameworks to help them understand why conflict might occur. Super and Harkness (1988) look at the influence of cultural beliefs and practices within the children's immediate environments. The 'developmental niche' consists of three subsystems, including the physical and social setting of the child, the beliefs and attitudes of caregivers, and the customs of child care and child-rearing (Myers 1992: 69). These three components help the child negotiate his or her individual experience within the broader community. The framework enables an exploration and understanding of difference and how the child accommodates difference into his or her understanding of the larger society. The 'developmental niche' is easily into an ecological framework, and provides a more detailed understanding of how customs of child care, child-rearing and parental beliefs influence the child's interaction with the broader environment.

As an overarching framework, the ecological model has also been criticised for not enabling the depth of understanding provided by more focused theories of human development. This could be a real limitation, but it can be overcome by the use of complementary theories to explain particular aspects of development within the ecological framework (Scott 1992). Certainly the development of infants and toddlers could not fully be understood without the contributions made by Piaget, Erickson, Vygotsky and Mahler. In particular the work of Vygotsky, which emphasises the

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crucial role of the adult and more experienced peer in facilitating children's development, is important. Equally, new understandings about the importance of attachment and the development of the brain during the first two years of a child's life are critical to understanding the processes at work in young children's development.

The role of the adult

Human relationships and interactions are the critical factors in young children's development. Strong attachments that are characterised by reciprocal activity enhance the young child's responsiveness to his or her environment and influence the child's motivation to explore, manipulate, elaborate and imagine (Bronfenbrenner & Neville 1994). Increasingly it is recognised that the maintenance of primary attachment relationships depends on the availability and involvement of another adult or third party who actively supports and encourages these relationships. The role of the caregiver must extend beyond the day-to-day care of the child to providing support to other family members or significant others in the child's life. An important part of that support is the establishment of effective channels for communication, a willingness to find a compromise, and the development of trust between family members and the child care staff (Bronfenbrenner & Neville 1994: 17). This trust is built when the relationship between caregivers and family members is genuine and truly collaborative.

Thus, as Professor Loris Malaguzzi from the early childhood programs in Reggio Emilia in Italy reminds us, the major role of the caregiver is as creator of relationships rather than as transmitter of knowledge (Malaguzzi 1994). According to Malaguzzi, young children are constantly in search of relationships, not only between people but between objects, thoughts and with the environment. The adult must be prepared to enjoy and to show children how to enjoy relationships. Each child in the program brings to it relationships, feelings, and experiences that form his or her reality. This requires the caregiver to position him or herself in direct relationship to the child.

A theoretical model for this relationship may be found in the discipline of social phenomenology, where the object of study is one's relationship to another person. That person is a special entity, who requires his or her own particular approach in order to understand the essential qualities of the social relationship (Laughlin 1997: 2). For such understanding to occur, the caregiver must share the same space and time as the child and recognise the child as equal in all respects, including the child's own understanding of self and attempts at expressing that self to others.

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