

# Blazing new trails: Finding the most direct routes in early childhood intervention

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*Broadening the Vision:  
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## Abstract

This paper addresses the principal theme of this conference, namely, broadening our vision of how we can build more cohesive communities for children and families. Who are the communities that we in early childhood and early childhood intervention serve? Where do we find them? And how can we best support them and meet their needs? In answering these questions, two lines of research and theory are considered. One concerns complexity theory, which suggests that a threshold level of regular contact with other people (eg. parents of young children) is needed for a consensus about their collective needs to emerge. The other concerns the importance of social support, how people's personal networks and social contacts affect their personal well-being and parenting. A third factor that must be taken into account is that our existing early childhood and early childhood intervention service system is no longer meeting all the needs of all the children as effectively as it once did.

Implications of these factors for the early childhood and early childhood intervention service systems are explored. Changes that are needed include building better integrated social systems for families and better integrated service systems for professionals; developing more effective ways for these two groups to talk; shifting to the focus of services to prevention; driving specialist expertise downwards; and clarifying what outcomes we are seeking for children and families. The implications of such changes for early childhood intervention services are considered. Early childhood intervention providers have particular skills that can facilitate the development of more cohesive services and communities, such as the use of natural learning environments, family-centred practice, and interdisciplinary teamwork. However, the early childhood intervention field will also be challenged to change in certain ways, and these are explored. The ultimate aim is the development of more cohesive communities that can better support all children (including those with particular developmental, behavioural or health needs) and all families (including those with exceptional support needs).

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## Introduction

In the first half of this paper, I will directly address our Conference theme – *Broadening the vision: Building cohesive communities for all children and families* – through a consideration of two lines of research and theory: complexity theory and social support. In the second half, I will explore the implications of this theory and research for early childhood services in general and early childhood intervention services in particular.

## Human trails

In my regular hunting and gathering journeys from the Centre for Community Child Health at the Royal Children's Hospital to the University of Melbourne libraries, I enter the university grounds by the Percy Grainger museum and walk around it to get through to the Baillieu Library. As one goes round the northern end of the museum, the most direct route to the walkway leading through to the library cuts across a patch of lawn. Inevitably, people take this route and wear a path across the lawn, much to the irritation of the university grounds staff. Over time, I have watched them try different strategies to protect their precious turf.

To start with, they roped off the patch of lawn and re-sowed it. A week after the lawn had re-grown and the ropes been removed, the dirt track was back. They tried again, this time sowing it with a tougher grass. They removed the ropes once more, and the delinquent walkers, finding the new grass too rough to walk on, simply walked on the softer grass beside it and created a new dirt track. By now, the ground staff were definitely peeved, and plaintive signs appeared at each end of the short path, asking 'Is it really so much further?' Not surprisingly, these did no good whatsoever, so they resorted to more drastic measures: they installed benches across the exit point and planted as large a tree as they could afford in the middle of the lawn. This did the trick, more or less: people now walked around the path as the landscapers had intended, although they did continue to cut the corners in a messy way.

I share this episode with you not only as a dispassionate observer of the human comedy, but because it illustrates an important phenomenon which has real relevance to our conference theme: building and serving communities. Let me explain.

I am not the first person to think about the questions raised by what are known as human trails. Such trails are common in the open spaces of urban environments. Sometimes it is reasonably easy to see why such trails have formed – as in the case I observed, they follow more direct routes to commonly used destinations than the landscapers allowed for. However, this is not sufficient to explain the particular characteristics of trail systems, which do not always follow the most direct routes. Nor does it explain how the routes are chosen, since each walker chooses their own route and does not have to follow where others walk.

Among others, a German physicist, Dirk Helbing and his colleagues at the University of Stuttgart studied the human trails created by students across the lawns he could see from his office window (Helbing, Keltsch and Molnar, 1997). They were interested in whether there were any regularities underlying what was apparently

random activity. They found that the trails paths rarely followed completely straight lines, usually picking a route where the walking is easiest, and avoiding rough or boggy areas. When any one person chose a route and trampled the grass, that route became a little bit easier to follow, until the route that satisfied most walkers became so well worn it became the only choice, even when it is not the most direct route. Helbing and colleagues found that they could simulate this process relatively easily on a computer, using a few simple equations to describe how each walker tries to strike a balance between shorter and easier paths, how the grass gets trampled as people walk over it, how this wears the turf and thereby alters the layout of paths available to future walkers, and how the established trails become progressively more attractive to walkers while the alternative routes grow over and disappear. The total length of trails a particular open space can support is limited by the number of people who walk across it each day, but within these constraints, the trails that form produce an optimal system, enabling people to get about on paths that, by and large, are both fairly short and easy to walk on.

Helbing and colleagues suggested that the mathematical algorithms that they had identified could be used by landscapers and town planners to predict where people would walk, so they could then pave these routes and prevent the despoiling of their best-laid plans. (This strategy would not have helped the University of Melbourne landscapers, since they had already laid out their paths and lawns, although there is another strategy they could have used that would also have solved the problem – I'll return to this later.) However, I'm interested in a different aspect of the human trail phenomenon: the fact that no single person determines where the path should go. As Mark Buchanan (2001) has observed, any network of trails emerges from the 'free actions of thousands of people all following their own intentions, and yet it conforms to very simple mathematical rules' (p. 157). Helbing and colleagues note that many other human social phenomena – including cooperation, the growth of settlements, traffic dynamics, and pedestrian movement - also share this feature and can be modeled mathematically.

### **Emergent complexity**

This is also true of a wide range of behaviours found in other species. The phenomenon we are talking about is known as emergent complexity, and is part of a wider body of theory and research known as complexity theory (Buchanan, 2001; Camazine, Deneubourg, Franks, Sneyd, Theraulaz and Bonabeau, 2001; Johnson, 2001; Waldrop, 1994; Ward, 2002). So common is this pattern that, according to Duncan Watts (2003), how individual behaviour aggregates to collective behaviour is one of the most fundamental and pervasive questions in all of science.

Camazine, Deneubourg, Franks, Sneyd, Theraulaz and Bonabeau (2001) define self-organisation thus:

*'Self-organisation is a process in which pattern at the global level of a system emerges solely from numerous interactions among the lower-level components of the system. Moreover, the rules specifying interactions among the system's components are executed using only local information, without reference to the global pattern. In short, the pattern is an emergent property of*

the system, rather than a property imposed on the system by an external ordering influence.'

Emergent complexity can be found among living cells and organisms everywhere. For example, ant and termite colonies act collectively in highly organised and adaptive ways, yet there is no leader giving the directions – the queen ant or bee is merely a baby factory, not a director or dictator. Similarly, flocks of birds and schools of fish are able to wheel in perfect synchronisation, yet there is no leader who decides when they should turn or how fast they should go or when they should stop.

The processes that govern the cellular development of our own bodies also display emergent complexity (Johnson, 2001). Cells do not just follow the dictates of DNA: they self-organise into more complicated collective structures by looking to their neighbours, figuring out which passages in the genetic code to pay attention to by observing signals from the cells around them. Thus, embryo development is completely decentralised: since every cell carries a complete copy of the genome, no cell has to wait for instructions from any higher authority, but can act on its own authority and signals from its neighbours.

The human brain is another self-organising system (Edelman, 1992; Siegel, 1999), and self-awareness is an emergent property of the brain: 'No individual neuron is sentient, and yet somehow the union of billions of neurons creates self-awareness' (Johnson, 2001, p. 204).

Can human behaviour follow the same rules and patterns as the behaviour of ants or birds or cells? Yes. The formation of human trails is one simple example. Another is the formation and evolution of neighbourhoods within cities, where people choose to live and why these change over time: neighbourhoods are 'polycentric structures, born of thousands of local interactions, shapes forming within the city's larger shape. ... No one wills them into existence single-handedly; they emerge by a kind of tacit consensus' (Johnson, 2001, p. 91).

Then there are the fads and fashions of speech, dress and behaviour. When I came back from living overseas for many years, I found that all the young people had begun to raise their voices at the end of sentences, as if they were perpetually asking questions. Who among them had decided to do this? More recently, young people began to sit on the ground or pavement whenever they were waiting for buses or just hanging around. They did not see anyone else doing this, and presumably came in from some criticism from their parents for being careless of their clothes.

Some of these emergent trends are transient, but others are much more long lasting. Many complex systems persist over time - the global behavior outlasts any of its component parts (Johnson, 2001). In ant colonies, generations of ants come and go, yet the colony itself matures, grows more stable and organized. Similarly, the cells of the human body are dying and being replaced all the time, without compromising the integrity of the whole or your own ongoing sense of yourself.

A related phenomenon is the pervasiveness throughout the natural world of spontaneous self-organising synchronicity: 'the tendency to synchronise is one of the most pervasive drives in the universe, extending from atoms to animals, from people

to planets' (Strogatz, 2003, p. 14). Examples of synchronicity include fireflies in South East Asia and other places that spontaneously synchronise their flashing; sperm swimming side by side en route to the egg beat their tails in unison 'in a primordial display of synchronised swimming' (Strogatz, 2003, p. 14); female friends or coworkers who spend a lot of time together find that their menstrual cycles tend to synchronise; and over the course of millenia, the incessant effects of the tides have locked the moon's spin to its orbit so that it turns on its axis at precisely the same rate as it circles the earth (so that we only ever see one side). All of these disparate phenomena are examples of the same underlying theme: 'self-organisation, the spontaneous emergence of order out of chaos' (Strogatz, 2003, p. 14).

What are the key features of emergent complexity or self-organisation?

- ***There is no top-down planning or directive from a higher intelligence or power:*** emergent systems are decentralised bottom-up systems, not centralised top-down systems (Johnson, 2001)
- ***All the elements in the system are equals*** (Watts, 2003) and the system as a whole cannot be controlled by any one of its elements. (Remember the game you played as adolescents, when you first became aware of the random and irritating way in which new words and phrases became fashionable, and you decided to plant a word or phrase of your own devising into the social stratosphere to see if it would become common currency. It didn't, of course, because conscious and deliberate planning rarely or never results in such outcomes. Popular language usage cannot be controlled in this way, any more than any one of the students could have determined exactly where the trail across the lawn should have gone.)
- ***Self-organising systems evolve and adapt to their environments:*** 'complex self-organising systems are *adaptive*, in that they don't just positively respond to events the way a rock might roll around in an earthquake. They actively try to turn whatever happens to their own advantage.' (Waldrop, 1992, p. 11)
- ***Complexity arises out of the interaction between relatively simple elements following simple rules and paying attention to their neighbours:*** The individual components that make up the system can be quite simple, but the interactions between them generate complex behaviour that none of them individually is capable of comprehending, let alone planning (Watts, 2003). 'They think locally and act locally, but their collective action produces global behavior.' (Johnson, 2001, p. 74)
- ***Decentralised systems rely extensively on feedback,*** for both growth and self-regulation. The feedback is both positive and negative, and the balance between these keeps the system in check

How is feedback information exchanged in complex self-organising systems?

Different living organisms use different strategies, all involving the exchange of simple information between neighbouring organisms: bees communicate by waggle dancing, ants rely on pheromones, while birds and fish follow a few simple rules based on what the bird or fish next to them does. Thus, we can simulate flocking behaviour on a computer by instructing the 'birds' to follow three simple rules: (1) match your speed to others; (2) do not run into others; and (3) move toward the

centre. This is enough to enable the flock as a whole to move in a coherent fashion (Olson and Eoyand, 2001).

At the human level, feedback occurs in a number of ways. One of these that is often overlooked is through contact in the street and other public places: neighbours learn from each other because they pass each other, and each other's houses and shops, on the footpath. It turns out that footpaths are important not just by virtue of their primary function of providing pedestrian access to places, but also because they 'allow relatively high-bandwidth communication between total strangers, and they mix large numbers of individuals in random configurations' (Johnson, 2001, p. 94).

### **Urban design**

This suggests that urban design plays a role in facilitating contact between people. This is in fact the basis for a town planning movement known as the New Urbanism that has championed the cause of humanising city and urban environments. This movement treats neighbourhoods as walkable catchments, with street layouts being analysed according to the degree to which they provide most residents with walkable access to the neighbourhood's centre, which may be shops, bus or train stops, or other community focal points. In general, most people will walk 400 metres or five minutes to a centre, or 800 metres or ten minutes to a major transit stop, if the route is pleasant and direct. The accessibility and connectivity of neighbourhood catchments are analysed using 'pedshed mapping', a tool which identifies the proportions of residents living in a 400 metre radius of a neighbourhood centre as well as those who are actually within 400 metres walk of that centre.

An example of New Urbanism principles at work is the *Liveable Neighbourhoods* project of the Western Australian Planning Commission. Comparisons between traditional suburban neighbourhoods in Perth such as Mt. Lawley and new developments such as Ballajura reveal that the old neighbourhoods score much higher on key features such as connectivity, permeability and accessibility. It is simply easier in old-style suburban neighbourhoods to walk to where you need to go and you are likely to see more people in the process.

Note that the issues at stake here are not simply environmental issues such as reducing the dependence upon cars (although that is a matter of importance). The question of interest here is the way that urban environments can promote contact between people or serve to isolate them. In the case of families with young children, what is important is how many of the services they need are within what the *Sure Start* planners in the UK call 'pram pushing distance', how pleasant and safe the walk is, and how many other families with young children are they are likely to meet on the way or when they get there.

### **Community development and community building**

As this example illustrates, the reason for exploring this body of theory and research is because of what it might tell us about how communities of people function and how services can best support them. Community development and community building have become the focus of increasing attention in recent years, both overseas (Etzioni, 1993, 1996; Putnam, 1995, 2000; Schorr, 1997) and in Australia (Cox, 1995;

Edgar, 2001; Fiske, 1999; Ochiltree, 2001; Winter, 2000). There has been concerns about apparent signs of a weakening of the social fabric, a growing recognition of the nature and importance of social capital, and calls for efforts to rebuild communities.

However, it is not clear what 'communities' are, or how service providers and systems can work with them. Services are being asked to respond to the needs of communities, but it is far from clear how we are to know what such needs are. If communities are no more than collections of individuals living in a particular locality, then finding out what their needs are and responding to them becomes problematic: we would have to consult each of them individually and somehow sum up their wishes and come up with an average. Using other methods such as focus groups or advisory committees is equally problematic – there is no guarantee that those involved in such groups are actually representative or have a good grasp of what the community members collectively wish for. Under such circumstances, most people find it difficult to rise above their own experiences and see the bigger picture. They are not to be blamed for this: we all live in small worlds, and

'... all experience is local – we only know what we know, and the rest of the world, by definition, lies beyond our radar screen. In social networks, the only information we have access to, and therefore the only data we can use to make assessments of the world, lies in our *local neighbourhood* – our friends and acquaintances.' (Watts, 2003, p. 83)

The usual strategy for dealing with this is to seek out leaders to represent the views of the community, people who have that relatively rare ability to stand outside their own experience and see the bigger picture. However, complexity theory suggests another approach: it describes the conditions under which complex collective behaviour emerges in populations without the need for leaders. The key conditions are the following (adapted from Johnston, 2002):

- **Critical mass.** For a consensus to emerge, there needs to be a critical mass of members of a population interacting with one another. If there are too few or too many, no consensus will emerge.
- **Simple information.** The information that population members exchange does not need to be complicated; indeed, complex information will only clog up the system. Where systems are densely interconnected and the information exchanged is relatively simple, more sophisticated understandings can emerge naturally.
- **Random encounters.** Decentralized systems rely heavily on the random interactions between members of the community.
- **Permeable environments.** The environment in which the population lives needs to be easy to move around in, so as to maximise random encounters between a wide range of community members.
- **Local information.** Complex collective behaviour only emerges when community members pay attention to those around them, those with whom they have regular contact. It is through the accumulation of local information that global wisdom emerges.

When these conditions are met, a greater degree of consensus is more likely to emerge among community members about the needs of that community. Without such a consensus to guide them, professional services make the decisions about what the communities' needs are and what services to provide. Inevitably, they do not always get it right.

Before considering the implications of all this for services for young children and their families, I want to explore a second important line of research and theory. This concerns the importance of social support and social capital for children and families.

### **Social support and social capital**

There are two related concepts we need to come to grips with. One is the notion of **social support** or **personal support networks** (Crnic and Stormshak, 1997; Crockenberg, 1988; Dunst, Trivette and Jodry, 1997; Roehlkepartain, Scales, Roehlkepartain, Gallo and Rude, 2002; Thompson and Ontai, 2000). These refer to the people in our lives, usually our family and friends, who are the most immediate sources of emotional and practical support. The strength of people's personal support networks varies according how many people they have in their social network, what sort of tangible support they provide, and how often they see them.

The other is the notion of **social connectedness** or **social capital** (Bush and Baum, 2001; Cooper, Arber, Fee and Ginn, 1999; Cox, 1995; OECD, 2001; Putman, 1995, 2000; Stone, 2001; Stone and Hughes, 2000; Winter, 2000; World Bank, 1998). These refer to the nature of the linkages within communities, which can vary according to the general level of trust and reciprocity in the relationships between members of the community.

Both social support and social capital affect the functioning of individuals, families and communities.

### **Social support and personal support networks**

Social support is believed to have both stress-preventive and stress-buffering features (Thompson and Ontai, 2000):

- On one hand, social support surrounds individuals with emotional and practical help that promotes their well-being
- On the other hand, social support reduces the toll of stressful events by helping people cope effectively

What are the key features of social support? According to reviews of the evidence (Cooper, Arber, Fee and Ginn, 1999; Crnic and Stormshak, 1997; Dunst, Trivette and Jodry, 1997), key features include the following:

- Social support can have both direct and indirect influences on child development and behaviour (Dunst, Trivette and Jodry, 1997). Direct influences occur through variations in the range and variety of people with whom the child has contact. Indirect influences occur through benefits to the parents and the family in general, which help them meet the child's needs more effectively. As Bronfenbrenner



(1979) noted, a child's development can be affected by events in settings in which the child is not even present.

- Social support can be provided by both informal and formal social network members, that is, by family and friends, or by service providers. Informal support has a greater influence on the personal functioning of parents than formal support (Dunst, Trivette and Jodry, 1997). When in need of help or support, people tend to turn to family and friends first of all, then to others in their wider circle of acquaintances, and only then to professionals (Roehlkepartain, Scales, Roehlkepartain, Gallo and Rude, 2002).

This phenomenon can be best understood in terms of Urie Bronfenbrenner's socio-ecological model of development (Bronfenbrenner, 1979, 1995; Bronfenbrenner and Ceci, 1994; Bronfenbrenner and Morris, 1998). He proposed that children's development was influenced not only by the more proximal, and relatively stronger influences, of the family and friends, but also by the more distal features of the broader social environment such as the community, formal services, and governmental policies. This model is usually depicted as a series of concentric circles, with the child and family in the innermost circle. What is particularly important to understand about this model is that the circles represent ever-diminishing sources of influence the further they are from the centre. Formal services (such as early childhood intervention programs) are relatively distal, and are therefore likely to have a lesser impact on family functioning than the extended family and friends.

- Not all social networks are supportive: people can be surrounded by a large network of individuals who are not supportive or they can have a small number of close friends who very supportive. More commonly, people's networks are made up of a mixture of positive, neutral and negative contacts. The make-up of family personal networks can be plotted using ecological family maps (Begun, 1996; Hartman, 1979).
- Whether support provided by professionals has the same beneficial effects depends upon the parents' need for support: those with high needs are likely to experience such support positively while those with low needs may experience it negatively. Similarly, where the support offered does not match the parents' needs, it is experienced negatively (Dunst, Trivette and Jodry, 1997).
- Whether support provided by professionals has the same beneficial effects also depends upon the nature of the relationship between parents and the professionals: the more that parents perceive professionals as being part of their informal social network, then the more likely they are to consult them or seek their support (Dunst, Trivette and Jodry, 1997). (This does not mean that professionals have to become friends with all parents, but it does mean that they need to establish comfortable working relationships with them. To achieve this, they need to stay around long enough, be available often enough, and have the personal qualities and skills to relate well to people of diverse backgrounds.)
- By virtue of its capacity to influence child, parent and family functioning, social support functions as a form of early intervention, providing supportive experiences and opportunities beyond those directly provided by early intervention programs. As an environmental variable, social support operates whether or not it is deliberately manipulated (Dunst, Trivette and Jodry, 1997).

- The larger and more diverse an individual's social network, the more access he or she will have to functional social relationships, and the more potential benefits there are likely to be for health (Cooper, Arber, Fee and Ginn, 1999).
- Social support may have a more positive effect on health and health-related behaviour, especially in times of stress, if it is provided by people of the same gender, age, ethnicity and socioeconomic background, or by people who have shared similar life-experiences (Cooper, Arber, Fee and Ginn, 1999).
- Social support has direct benefits for family functioning but mostly influences child functioning in indirect ways: 'the primary function of such support systems is to provide a more solid parenting foundation from which parents may, in turn, facilitate more positive child development' (Crnic and Stormshak, 1997, p. 211).

Local evidence of the importance of social support for adults comes from the 2002 Victorian Population Health Survey (Department of Human Services, 2003) which examined the impact of social networks on people's physical and mental health. The survey measured networks ranging from informal social contacts (such as friends, family, neighbours), to membership or involvement with broader organisations (for example, belonging to a sporting club, church or professional association, attending community events, or helping out a local group as a volunteer). The survey found that people with stronger networks

- enjoy higher levels of physical health and lower levels of psychological distress
- were more easily able to access help of various kinds in cases of emergencies (eg. needing to borrow money urgently, needing child care urgently)
- felt they were able to have a say on important matters in their community
- felt more valued by society
- felt safe walking down the street after dark
- felt that most people could be trusted
- valued living in a multicultural neighbourhood

Among adults, social support has a significant impact on health and well-being (Stansfield, 1999). There is also considerable evidence for the importance of social support for children and families: 'Numerous studies of children and families both at risk and not have shown that social support directly influences the well-being of children and families' (Crnic and Stormshak, 1997, p. 210). Social support has been found to be linked to a number of child and family outcomes, including low birthweight (Oakley, 1992), child abuse (Gracia and Musitu, 2003; Korbin, 2003; Thorpe, 1994; and Tomison, 1996), child neglect (Connell-Carrick, 2003), maternal adjustment (Barakat and Linney, 1992), mental health (Cooper, Arber, Fee and Ginn, 1999), and physical health (Cooper, Arber, Fee and Ginn, 1999).

Social support is just as important for families of children with disabilities as it is for other families. For instance, in a study of families with children with spina bifida, Barakat and Linney (1992) found that the mothers' psychological adjustment improved as the available network, the proportion of family members in the network, and the support satisfaction increased. For children with spina bifida, the better their mothers' social support, the fewer behaviour problems the children had.

It is clear from this brief review that the nature and extent of parents' personal support networks have a significant influence on their personal well-being as well as their capacity to care for and raise their children as they would wish. For families to function well, positive personal support networks are just as important (if not more so) than formal professional services.

Before considering the implications of this for services, I want to look at the theory and evidence regarding social capital and social connectedness.

### **Social capital and social connectedness**

According to Stone (2001), 'Social capital consists of networks of social relations which are characterised by norms of trust and reciprocity' (p. 4). There are various forms of trust, including trust in members of one's immediate and extended family, trust in strangers, and trust in the formal institutions of governance. The second key characteristic of social capital is reciprocity, which is the process of exchange within relationships whereby 'goods and services' provided by one person are repaid in some way by the person receiving them. Thus, in communities that are high in social capital, there are strong connections between members of the community based on mutual trust and reciprocal exchanges.

Like social support, social capital is thought to have direct benefits for individuals and communities. For example, the OECD (2001) links social capital, and access to such capital, with a number of factors, including improved health, greater well-being according to self-reported survey measures, better care for children, lower crime rates, and improved government - regions or states with higher levels of trust.

When social capital is high and communities are well-connected, children and families benefit in a number of direct and indirect ways (Fegan and Bowes, 1999): 'All families ... need access to information that helps them gain a realistic understanding of their child's development and of the possible impact of developmental changes on family life.' (p. 122) In well-connected communities, families have many opportunities for 'incidental encounters with other children and other parents within the local neighbourhood, encounters that can provide such information, reduce the intensity of uncertainty and alleviate parental anxiety.' (Fegan and Bowes, 1999, p. 122)

However, not all families have equal access to such opportunities:

'There is now good evidence that the network resources available to parents vary substantially depending upon parents educational experience, income, occupation, the number of parents in the household, race, and even in the culture in which they live.' (Cochran and Niego, 2002, p. 137).

Such factors serve to reduce the number of eligible people with whom the parents can form relationships, so that they are at risk of becoming socially isolated. Isolation can be the result of a number of factors (Fegan and Bowes, 1999; Ochiltree, 2001). These include:

- geographic isolation (living in rural and remote areas)
- physical isolation (being cut off from the local neighbourhood by a six-lane highway)

- poor health, disability or special needs
- cultural isolation (not being able to speak the language)
- social isolation (being new to an area and not knowing anyone)
- reduction in support provided by extended families as a result of increased mobility and other factors (eg. grandmothers may be unavailable to provide child care because they are still working)
- increase in the number of single parent families (with associated financial stresses and time pressures)
- lack of money to reciprocate hospitality
- increase in the number of mothers in the workforce (with consequent reduction in time with the children and with other parents)
- difficulty in accessing services or settings used by other families (because of lack of personal or public transport)
- perception that local environments are unsafe

Unfortunately, as Thompson and Ontai (2000) point out, it is often those most in need of social support who are most isolated. This includes families of children with disabilities, who are at particular risk of social isolation. Apart from all the above reasons, other factors that can contribute to their social isolation include

- loss of their existing support network following birth or diagnosis of child with a disability,
- the narrowing of opportunities to mix with others because of the limitations placed by the child, and
- the tendency to provide specialist support in segregated settings.

It is obvious that the nature and extent of people's personal support networks and the nature of the social connections or social capital in the wider community are likely to be closely linked. It is certainly possible for individual in dysfunctional and poorly connected communities to have strong personal networks, but it is much less likely.

## **Implications**

What are the general implications of these findings regarding social support and social capital?

One implication is that, since personal support networks are important for child development, parental well-being and general family functioning, we should be seeking to ensure that all families have supportive social networks (Cochran, 1991; Dunst, Trivette and Jodry, 1997; Cutrona and Cole, 2000; Erickson and Kurz-Riemer, 1999; Thompson and Ontai, 2000). However, helping build effective family support networks is not a simple matter (Thompson and Ontai, 2001). As mentioned earlier, not all social networks are positive.

'Thus social support interventions must seek to accomplish far more than simply increasing the size of a social network or the frequency of contact with other people, or making recipients feel good about themselves. Interventions must seek primarily to strengthen the constructive influence of natural and

formal helpers on the behaviour of parents and children.’ (Thompson and Ontai, 2000)

What matters is not just the quantity of social support a person receives, but also the quality of that support – that is, *how* the support is provided is as important as *what* is provided. Thompson and Ontai (2000) suggest that

- social support is more easily accepted when recipients have opportunities to reciprocate or repay the aid they receive
- social support is more readily received in circumstances that minimise the potential for humiliation or stigmatisation, such as when support services are broadly available or universal (rather than specifically targeted to those in greatest need) and accessed in everyday settings (rather than an agency office)
- social support is better received when both the recipient and the provider agree about the need for assistance and the reasons for the need, rather than being based upon another's judgement of the recipient's inadequacy or incompetency

Thompson and Ontai (2000) conclude that efforts to provide social support do not guarantee beneficial outcomes. Instead, the effectiveness of social support depends on factors such as who provides support, what are the goals of doing so, how the recipient responds to this effort, and the broader community context in which this occurs. More specifically, social support interventions are most likely to be effective when:

- there are clear, well-defined goals in mobilising social support that are based on a careful analysis of the needs of family members and how support agents can address these needs;
- the efforts of formal helpers and informal helpers within natural social networks are integrated and co-ordinated;
- social support interventions provide bridges to broader community resources that can offer recipients long-term assistance;
- the need for social support is normalised within the community, so that receiving assistance is not stigmatising or humiliating;
- there are efforts to improve recipient reactions to accepting aid, which may include reducing feelings of vulnerability, failure, or inferiority by providing opportunities to reciprocate aid, promoting recipients' voluntary participation in social support interventions, and developing an environment of mutual respect; and
- help providers are themselves supported through continuing supervision, training, and other forms of assistance.

The other main implication of the findings regarding social capital is that we should be seeking to build social capital and promote community connectedness (Etzioni, 1993, 1996; Edgar, 2001; Homel, Elias and Hay, 2001; Labonté, 1999; Perkins, Crim, Silberman and Brown, 2004; Schorr, 1997; Weissbourd, 2000). In Victoria, this has led the current government to create a whole new department – the Department of Victorian Communities – to focus its efforts in this regard. Similar efforts are being made in other states and countries.

## Complexity theory and social support

Now let's put these two bodies of theory and research together and see what they tell us about how we can best support young children and their families.

- Complexity theory suggests that **communities are capable of determining their own collective needs under certain conditions**. Since it is preferable for communities to determine their own needs, we should seek to create those conditions.
- One of the conditions is that **there needs to be a critical mass of community members having frequent contact with one another**. Parents need a threshold level of contact with others, not too many and not too few. When making decisions,

‘... asking too few people is potentially bad, because you make yourself susceptible to errors. But asking too many people is bad also, because the relevant information then gets lost in the noise.’ (Watts, 203, p. 229)

A threshold level of regular contact with others is also necessary of a wider consensus is to emerge, eg. about how to bring up children, or about what services families need.

- Both complexity theory and social support evidence suggest that **parents need lots of opportunities for random encounters with other parents of young children**. Even seeing other parents and children in the street or in shopping centres involves an exchange of information – parents take note of how other parents are behaving towards their children, where they are going, how the children are dressed. All of this provides the parent with a rich array of examples with which to compare their own practices, and this helps them be clearer about what sort of parent they want to be.
- To facilitate such encounters, **we need urban environments that are easy to navigate and that provide lots of opportunities for random encounters between people in the community**. In the terms used by urban planners, we need environments that are high in connectivity, permeability and accessibility.
- Both complexity theory and social support evidence also suggest that **parents and children need regular opportunities to interact with other parents and young children**. These interactions could take place in many settings, including Maternal and Child Health centres (eg. first-time mothers' groups) and playgroups, as well as swimming pools, libraries and shopping centres.
- To facilitate such interactions, we need to ensure that **all families have easy access to family-friendly settings where they can meet other families and also access the services they need**. These settings should be pleasant places that both parents and children look forward to visiting. Where such settings do not exist, we should be exploring how to establish them.
- The social support literature shows suggests that **all families benefit from having positive personal support networks and should be helped to find such support when it is lacking**. However, we need to recognise that personal support networks are, by definition, personal, and therefore cannot be arranged or

determined by professionals. All professionals can do is create the conditions under which such networks can develop. Among other things, this would involve doing what is suggested above - providing parents of young children with multiple opportunities to meet other parents of young children, and creating places where they can do so.

The analysis I have just presented forms part of a wider line of reasoning and analysis about why and how services for young children and families need to be reconfigured. There is not time to consider all the other elements of this argument in the same detail as we have just considered complexity theory and social support, but let me share with you the overall framework that is guiding the thinking of my colleagues and I at the Centre for Community Child Health. This framework incorporates reasons why change is needed, what form the changes should take, and what action is needed to make these changes.

### **Need to change**

There are four main reasons why we need to rethink the way we support families with young children:

- ***Changes in families and family circumstances.*** Over the past few decades, families have become more diverse in their structure and cultural background. Families have always been diverse, but there has been an increase in the proportion and variety of 'non-standard' families. Besides the changes in the structure and diversity of families, there have also been significant changes in the circumstances in which families are raising young children. As a result, there are more families with multiple needs, and, overall, parenting young children has become a more complex and more stressful business for many families.
- ***Difficulties that services are having in meeting all the needs of all families.*** As a result of changes in families and family circumstances (as well as other economic, demographic and social factors), early childhood and family support services are having increasing difficulty meeting the needs of all young children and their families effectively. These difficulties take a number of forms, including
  - Many services, both mainstream and specialist, have waiting lists and are unable to provide help when the need is first identified.
  - No single service is capable of meeting the complex needs of many families, and these unmet needs may loom larger in the lives of parents than the needs of the child with a developmental or mental health problem.
  - Families have difficulty finding out about and accessing the services they need
  - Services are often not well integrated with one another and are therefore unable to provide cohesive support to families
  - Services have difficulty tailoring their services to meet the diverse needs of families, and still tend to deliver services at times and in places that suit the needs of the professionals involved rather than those of the families themselves.

- Services are typically treatment-oriented rather than prevention- or promotion-focused, and therefore cannot respond promptly to emerging child and family needs
- The service system does not maintain continuous contact with families of young children during the early years

As a result of these and other factors, the early childhood and family support system is no longer meeting all the needs of all the children as effectively as it once did. Overall, we have a system that meets the needs of professionals and bureaucracies more effectively than those of families.

- **Concerns about poor developmental outcomes.** Across a wide range of health and well-being indicators, the rates of poor developmental outcomes for adolescents and young adults have risen or are unacceptably high. The distinguished epidemiologist Fiona Stanley, Australian of the Year in 2003, reports that

‘Rising rates are being observed for low birth weight, neurodevelopmental disorders, asthma, type 1 diabetes, inflammatory bowel disease, autism, mental health morbidities, child abuse and neglect, adolescent suicide, obesity, eating disorders, learning disabilities, behavioural disorders, aggressive behaviours and violence, school drop out and truancy, juvenile crime, illicit drug and alcohol use, teenage births.’ (Stanley, 2001)

The developmental pathways that lead to each of these poor developmental outcomes can be traced back to early childhood. While what happens in early childhood does not *determine* what happens later, it does place children on developmental pathways that become increasingly difficult to alter as time passes. Among other reasons why this should be a cause of concern is the fact that all the poor developmental outcomes identified have associated social and financial costs that cumulatively represent a considerable drain on societal resources.

- **Recent findings from developmental research.** Evidence about the nature and importance of development during the early years continues to accumulate. If we had to pick out one set of findings that has the most immediate implications for early childhood and family support services, it would be the impact of risk and protective factors in children’s lives. Risk and protective factors are cumulative in their effects, and interact to produce a wide range of outcomes. Furthermore, we have learned that interventions that address only one risk factor – eg. that only target mothers with postnatal depression or only provide therapy services for a child with a disability – may make a short term difference but cannot produce sustained change, at least for families with complex needs. Sustained change can only be achieved when the service system as a whole coordinates its efforts and addresses multiple risks at different levels simultaneously.

When considered together, these four factors present a compelling argument for reviewing the way that we provide services to young children and their families.



## What to change

What form should this change take? We believe that there are three main ways in which change is needed: we need better integrated communities, better integrated services, and improved forms of dialogue between communities and services.

- ***Better integrated communities.*** As a result of the pervasive economic, social and demographic changes that have occurred over the past few decades, there has been a partial erosion of traditional family and neighbourhood support networks. This has left a greater proportion of parents of young children with relatively poor social support networks and therefore more vulnerable. The evidence we have already considered about the importance of social support and social connectedness strongly suggests that one way in which we could address this problem is by providing families of young children with multiple opportunities to meet other families of young children. Complexity theory suggests that there is value in random encounters as well.
- ***Better integrated services.*** In the light of the difficulties that services have in meeting all the needs of all families effectively, the service system needs to become better integrated, so as to be able to meet the multiple needs of services in a more seamless way. We need to turn the system around so that it puts the customer first, tailoring our services to the needs and circumstances of families rather than the needs of professional and bureaucracies.
- ***Improved forms of dialogue between communities and services.*** For the service system to become more responsive to the emerging needs of young children and families, we need better ways of communicating, more constant feedback. This needs to occur at all levels, involving service providers in their dealings with individual families, agencies with their client groups, and service systems with whole communities. For individual professionals, this means using a service philosophy such as family-centred practice as well as needs-assessment procedures and tools that regard parent input as being as important as professional input. For service systems, it means developing skills in talking to communities of families – in other words, community-centred practice.

## How to change

We have identified a number of steps that need to be taken to implement these changes. There is no time to consider these in detail here, but the key elements are as follows (see figure next page):

- **Action:** Develop more supportive social environments for families  
**Method:** *Community-centred practice*
- **Action:** Develop a stronger universal service system  
**Method:** *Family-centred practice*
- **Action:** Develop stronger linkages between services  
**Method:** *Professional partnerships*

## Implications for early childhood intervention services

What are the implications of this big picture for early childhood intervention services, for those of us who work with families of young children who are experiencing developmental problems as a result of disadvantage, disability, or family trauma?

The first implication is that ***we must see ourselves as part of the reformation of early childhood and family services*** that is under way. We will do the children and families we serve no favours by continuing to think of early childhood intervention services as a separate stream of specialist programs that should be maintained as a discrete system. No individual service or set of services is able to meet all the needs of families we work with, and early childhood intervention needs to be part of a wider integrated system of child and family services.

A second implication is that, if we are to properly represent the interests of the children and families we serve, ***we should seek to be actively involved in shaping the new system***. As it happens, the early childhood intervention field has a number of tools or assets that can contribute significantly to the general redevelopment that is needed. These include our evolving knowledge of how to build upon children's natural learning environments, as well as our more established skills in family-centred practice and interdisciplinary teamwork (Bruder, 2002; Moore, 2002).

- ***Natural learning environments*** (Bruder and Dunst, 1999; Childress, 2004; Dunst, 2001; Dunst and Bruder, 2002; Hanft and Pilkington, 2000; Hanft, Rush and Shelden, 2004; Hanson and Bruder, 2001; McWilliam, 1992; McWilliam and Scott, 2001; Roper and Dunst, 2003; Rush, Shelden and Hanft, 2003; Shelden and Rush, 2001) enabling specialist skills to be applied in everyday environments through family routines
- ***Family-centred practice*** (Blue-Banning, Summers, Frankland, Nelson and Beegle, 2004; Dunst, 1997; Hanson and Lynch, 2004; McBride, 1999; McWilliam, Winton and Crais, 1996; Moore, 2004; Rosenbaum, King, Law, King and Evans, 1998; Turnbull, Turbiville and Turnbull, 2000; Viscardis, 1998) as a general service philosophy, not just a specialist way of working in early childhood intervention (Briar-Lawson, Lawson, Hennon and Jones, 2001).
- ***Interdisciplinary teamwork*** (Bruder, 2002; Briggs, 1997; Garland and Frank, 1997; McWilliam, 2000; McWilliam and Scott, 2001; Rapport, McWilliam and Smith, 2004) as the basis for integrated child and family support services, not just service delivery in early childhood intervention

A third implication is that ***the early childhood intervention sector needs to consolidate its skills and learnings in these three areas***, confident that they represent much needed assets for the wider system of services. This means that we need to continue to develop our skills in working in these ways, as well as developing our ability to share this knowledge and skills with related services. For instance, in a valuable new approach to this task, Hanft, Rush and Shelden (2004) have articulated the skills and processes involved in coaching parents (or other colleagues) in how to support children's participation in everyday activities and interactions with family members and peers.

In consolidating our skills in these areas, we have to acknowledge that they are not uniformly well developed across our field. The use of natural learning environments is an emerging best practice rather than an established one (Shelden and Rush, 2001), and there continues to be a gap between rhetoric and the reality of family-centred practice (Bruder, 2000; McBride and Peterson, 1997; Moore, 2004). In a recent effort to address the latter problem, Blue-Banning, Summers, Frankland, Nelson and Beegle (2004) have identified indicators (not just principles) of collaborative partnerships to help practitioners be clearer about what such partnerships involve and begin to measure it.

A fourth implication is that we need to explore ***the commonalities that exist between specialist early childhood intervention services on the one hand, and mainstream early childhood and family support services on the other.*** These commonalities may take many forms, but the most important are those that exist between children with and without developmental disabilities, and between families of children with developmental disabilities and families of normally developing children (Moore, 2001a, 2001b, 2003a; Snow, 2001).

Young children with developmental disabilities share the same core needs as all other children, needs that are easily lost sight of when parents or specialists focus unduly on their special or additional needs. There is also evidence that there are many commonalities between the practices that have been found to be most effective in working with children who have developmental disabilities and those recommended for children who have no developmental problems (Moore, 2001a). The children themselves, and the underlying principles for working with them, are more the same than different.

This is true also of families of children with and without developmental disabilities. Families of children with developmental disabilities have universal needs that they share with all families, plus some additional needs unique to their particular subset of families. This is in contrast to thinking of them as a different classes or types of families altogether, all of whose needs should be met through different specialist systems of services.

‘Focusing on the universal needs of families has important consequences for how supports and services are delivered. It means ensuring that families with additional needs get access to universal services, with additional specialist support added to the extent required. The alternative approach is to provide these families with specialist services first of all, adding access to normal services where possible. This tends to result in families being ‘captured’ by specialist services and having much reduced access to mainstream services, even though the specialist services are often unable to meet all the needs of all families.’ (Moore, 2001b)

There are also commonalities between services that have traditionally operated separately from one another. The metaphor used to capture the way that services seem inevitably to become compartmentalised is to refer to them as ‘silos’, vertical divisions that occur between different government departments, between service sectors, or between professional disciplines. These divisions serve to prevent

cooperation in service delivery, reduce cross-fertilisation of ideas and methods, and obscure common training and resourcing needs. What we need to counterbalance the vertical linkages within departments, services and disciplines are horizontal linkages that focus on the core skills, methods and training needs that are shared by all services working with young children and their families (Australian Council for Children and Parenting (2003).

We should also recognise the commonalities that exist *within* specialist early childhood and family services. Within early childhood intervention services for children with developmental disabilities, the traditional separation of services according to disability types needs to give way to a greater recognition that, while the causes of the developmental disability may be unique, the children's functional needs and the methods used to help them have strong commonalities across disabilities. These groups are less unique than we have traditionally assumed, and there is as much to be gained from focusing on what they have in common as on how they differ.

A fifth implication is that ***we should be adopting a partnership approach at all levels of service delivery and planning*** (Moore, 2003b). Partnerships with parents and families are fundamental to family-centred practice and to all forms of best practice in human services (Blue-Banning, Summers, Frankland, Nelson and Beegle; 2004; Darling, 2000; Davis, Day and Bidmead, 2002; McWilliam, McMillen, Sloper and McMillen, 1997; Roberts, Rule and Innocenti, 1998; Stonehouse, 2001; Turnbull and Turnbull, 2000; Turnbull, Turbiville and Turnbull, 2000). However, there are many other forms of partnership that are important in the current context: these include partnerships with government, with communities, with other agencies, and with other professionals. And in addition to partnerships with parents and families, there is an equally important form of partnership: the partnerships that we as adults, whether as professionals or as parents and caregivers, form with children (Moore, 1993b).

Why do we need partnerships? There are two principal reasons. One reason is that better outcomes can be achieved through partnerships (McBride, 1999; McKim, 2000). The other reason is that, in devising and implementing new forms of service and new ways of delivering them, we will need everyone's input. We can see the direction in which we should be moving, but not the precise details. Those have to be developed collectively, through trial and error, guided by constant dialogue. This means that we have to think beyond the partnerships that professionals and parents in meeting the needs of particular children and families: parents also need to be involved in all other aspects of services, including planning, evaluation, and training.

A sixth implication is that we must ***rethink the nature of professional expertise***. In seeking partnerships with families, communities and other services, professionals need to relinquish their role as the sole expert, recognising the expertise of others (especially parents), and harnessing the synergies that arise from a true sharing of collective knowledge and skills (Hanna and Rodger, 2002; Turnbull, Turbiville and Turnbull, 2000; Turnbull and Turnbull, 2000). However, this does not mean devaluing professional knowledge and skills. On the contrary, as I have argued, professional expertise is needed more than ever, not just by the children and families they serve, but also by the wider system of early childhood and family support services. What is needed is a rethinking of the true nature of professional knowledge and skills, and

how they can be best deployed to meet the needs of not just the families they serve but of all families. In effect, professionals need to understand that, while their expertise may have greater limits than has been previously acknowledged, it is also more widely applicable and needed than is currently recognised.

### **Challenges facing the early childhood intervention sector**

If we accept my argument about the direction we should be moving, there are a number of challenges to be faced in doing so.

The first challenge is ***how to meet the demand for our services***, that is, how to provide support for all children and families who are in need. A distressing feature of the early childhood intervention scene in recent years has been the growth of waiting lists. Not to be able to provide immediate help to families is obviously contrary to one of the key underlying rationale for early childhood intervention, that we should intervene (ie. provide specialist support) as early as possible. We should regard having families wait for months or even years for service as totally unacceptable. (Example of family having an additional child and deciding not to feed or clothe it because they only have enough to feed and clothe the others.) We need to stop hiding behind the excuse of insufficient government funding and think of new ways of providing immediate support. The truth is that all specialist forms of support and intervention are underfunded, and there is no way that the government can fund all of them in their present form at the level that would enable them to meet the needs of all those eligible. Instead, we must collectively address the challenge of how we can, within existing resources, meet the needs of *all* those needing specialist support.

Another major challenge is to learn ***how to base services on outcomes rather than outputs***. Governments often fund services on the basis of outputs, but outputs are not necessarily related to efficacy, ie. to achieving desired outcomes. Governments are not to be blamed for this, since the early childhood intervention field is not always of one mind as to what outcomes their services are designed to achieve, or how to measure them. For early childhood intervention services to be effective, it is essential that there is agreement about what they are trying to achieve and what the desired outcomes are. However, evolutionary shifts in early intervention philosophy and practice have been accompanied by changes in how we conceptualise what outcomes we are seeking for children and families (Moore, 1996; Bailey, McWilliam, Darkes, Hebbeler, Simeonsson, Spiker and Wagner, 1998). The result is that there may no longer be a clear consensus in the early childhood intervention field. The recent debate in the US about the aims of the Head Start program (Zigler and Styfco, 2004) illustrate this.

It is important to be clear about the outcomes we are seeking because, if services are not driven by outcomes, then they will be driven by other factors. These include habit or custom (this is how we have always done it), unproven assumptions (these particular children 'need' this kind of program), or community expectations (the tendency on the part of parents to over-value professional expertise and hands-on therapy). Programs that base service delivery on any of these factors are less likely to achieve desirable outcomes than services that are clearly focussed on agreed goals. The early childhood intervention field should take the lead in this matter,

seeking to clarify what outcomes we (parents and professionals) want to achieve and how we will know when we are achieving them.

Another major challenge is ***how to ensure that services are based on clear theories of change***. This entails striking the right balance between evidence-based practice and practice-based evidence. According to the Committee on Integrating the Science of Early Childhood Development (Shonkoff and Phillips, 2000), there has now accumulated 'sufficient knowledge to build an intellectually rigorous, common theory of change for the field' (p. 340). Similarly, Odom and Wolery (2003) argue that there now exists as a strong, evidence-based set of practices that service providers and caregivers use to promote the development and well-being of infants and young children with disabilities and their families. Law (2000) provides guidelines for direct service providers on how to do this. While evidence-based practice is well established in other fields (notably medicine), it has not got a strong foothold in early childhood intervention, partly because of the relative scarcity of high quality studies. However, the amount of good quality studies is steadily increasing and it is time for early childhood intervention to begin systematising this knowledge and using it. However, we also need to recognise that not all aspects of effective service delivery are covered by evidence-based practice – some derive from practice-based evidence instead. Evidence-based practice focuses on the *method* by which change is achieved, and only using those methods that have been empirically proven to be effective (National Health and Medical Research Council, 1999; Sackett, Rosenberg, Gray, Haynes and Richardson, 1996; Sackett, Straus, Richardson, Rosenberg and Haynes, 2000). Practice-based evidence focuses on the *outcomes* desired by clients, gets regular feedback from clients as to whether these are being achieved, and adjusts the method being used to achieve the outcomes that the clients want (Duncan, Miller and Sparks, 2004; Miller, 2004; Miller, Duncan and Hubble, 2004).

Both have a place in early childhood intervention. The effectiveness of early childhood intervention depends upon *what* is provided as well as *how* it is provided, that is, upon the knowledge and skills of the professionals as well as on their personal qualities and the nature of the therapeutic alliance they establish with parents (Dunst and Trivette, 1996). *What* is provided should be based on evidence-based practice, and *how* it is provided upon practice-based evidence.

A fourth challenge is ***how we can ensure that early childhood interventionists receive ongoing training in the skills they need*** to reconfigure their services in the way that I have suggested. We have already identified what these skills are:

- ***Skills to work with families*** – this involves general training in family-centred practice (Bailey, McWilliam, Winton and Simeonsson, 1992; Bruder, 2000; McBride and Brotherson, 1997; Stayton and Bruder, 1999) as well as specific training in the counselling / helping skills needed to make such an approach effective (Davis, Day and Bidmead, 2002; Hornby, 1994; Moore and Moore, 2003)
- ***Skills to work with communities*** – this involves training in community-centred practice (Adams and Nelson, 1995; Prelock, Beatson, Contompasis and Bishop, 1999).
- ***Skills in working with other professionals*** – this involves training in transdisciplinary teamwork (Briggs, 1997; Straka and Bricker, 1996; Widerstrom and Abelman, 1996).

- **Skills to work with other agencies** – this involves training in how to work in partnership with other services (Lowenthal, 1996; Rosin and Hecht, 1997), including how to share our specialist expertise and help non-specialist service providers apply natural learning opportunities approaches in mainstream and community settings (Gettinger, Stoiber, Goetz, and Caspe, 1999; Johnson, Zorn, Tam, Lamontagne and Johnson, 2003; Knapp-Philo, Corso, Brekken and Bair Heal, 2004)

One of the barriers to implementing such a training agenda is the lack of any coordinated training framework in the early childhood intervention sector. This is not a problem exclusive to early childhood intervention: a recent Australia-wide review of the training needs of those who work with young children and families found that the same was true of early childhood and family support services in general (Australian Council for Children and Parenting, 2003). Among other findings, this review concluded that there was a need for interdisciplinary training (Bailey, 1996; Bruder, 1999; Kilgo and Bruder, 1997; McCollum and Stayton, 1996; Rosenkoetter and Stayton, 1997; Stayton and Bruder, 2002; Stayton and Godfrey, 1995) and for parents to be involved in training professionals (Capone, Hull and DiVenere, 1997; McBride, Sharp, Hains and Whitehead, 1995; Niemeyer and Proctor, 1995; Stayton and Bruder, 2002; Whitehead, Jesien and Ulanski, 1998).

## Conclusions

To conclude, I want to return to the title of my paper, and the notion of blazing new trails. This can be understood in several different ways. Blazing new trails can mean creating new links between services, between families, and between services and families. I have argued that we certainly need to be doing more of this. Blazing new trails can also mean creating new ways of going where we want to go, that is, setting up new integrated services in new community-based venues based upon what works best for families. Again, we need to be exploring these possibilities as well.

A third meaning of blazing new trails can involve professional services responding to the existing 'trails' of families and communities, that is, paying attention to where they go and how they get there, and building upon these routes and destinations - providing services where they go / are – in this sense, it is not the professionals who blaze the trails, but the families. Going back to my example of the lawn-wrecking students at the University of Melbourne, there is another solution to the dilemma faced by the university grounds staff: rather than trying to block off the students' preferred route and force them to use the one chosen for them by the landscapers, they could simply pave the path the students use and turn the one they don't like into garden. This is not a solution that landscapers like or perhaps even think of. But then, neither do bureaucrats or service providers – when people don't use our services, we focus on how to encourage or even force them to do so, rather than looking at redesigning what we offer to suit their needs and preferences better.

Finally, there is the question of who blazes new trails, who creates the new ways of getting to where we want to go? Complexity theory suggests that the answer is no-one and everyone: no single person or agency determines how we get to where we want to go – we all do, by paying close attention to those around us and what they

are doing, what they want and what they need. That, I suggest, is the most important meaning of blazing new trails.

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