

## **AUTISM : CURRENT ISSUES 15**

These summaries of recently published material begin with a description of how children with autism perceive and define loneliness, with implications for support for an emotional rather than cognitive view of the core deficit in autism, and for not under-estimating the needs of high functioning children with autism.

Reference is then made to the view, albeit theoretical rather than evidence-based, that the processes described under 'Intensive Interaction' may well be applicable to, and beneficial for, children with autism.

Following-on from the above, there is a description of the work whereby children with severe learning difficulties and autism can be taught to use non-verbal signals, with the suggestion that an emphasis upon autistic deficits may obscure the potential for communication that children *do* possess, and that it may be more appropriate to match adult intervention and approach to the particular needs of the child rather than matching the child against some 'external' target or norm..

The final section questions whether there is a meaningful distinction to be drawn between high functioning autism and Asperger Syndrome.

### **Peer Interactions and Loneliness among High-Functioning Children with Autism**

The present writer completed a survey of the attitudes/experiences of a sample of children with Asperger Syndrome attending mainstream secondary schools (Connor 2000), and highlighted the social difficulties and limited peer affiliations of the sample, with particular problems surrounding how to occupy the free periods at break and lunchtime.

The work of Bauminger and Kasari (2000) is relevant to this issue in that they examined loneliness and friendships in a sample of high functioning children with autism.

The authors begin with a review of studies which conclude that feelings of loneliness stem from an unmet need to have friends and a lack of bonding, coupled with an understanding of the gap between what is desired socially and what actually exists. Loneliness appears a complex emotion which is highly dependent upon the influence of peers.

It is argued (Weiss 1973) that loneliness may have two basic forms. Emotional loneliness is a matter of subjective response to the lack of bonding with other people involving sadness or restlessness. Social cognitive loneliness is based upon cognitive processes such as self perception and social comparison, and arises when the children perceive their social relationships as unsatisfactory. Unlike the kind of sadness which arises from emotional loneliness, the social cognitive form may lead to feelings of exclusion or of being marginalised, and to a sense of meaninglessness.

The concept of loneliness has been implicitly discussed within the research literature, beginning with Kanner (1943) who described children content to play for hours with objects with minimal relationships with others and who were said to show a strong desire to be alone.

However a desire for being alone is not the same as loneliness and it is not clear if the autistic children are happy with being alone so that they do not feel lonely, or if there are feelings of loneliness alongside a desire for peer interaction.

Meanwhile, it is argued that both forms of loneliness would be relevant in any study of autism as a means of highlighting whether autism is a disorder of cognitive processes or of basic emotional processes. The cognitive approach would predict that problems in respect of understanding the thoughts and feelings of other people all of interpreting social situations would result in limited understanding of the social cognitive form of loneliness. On the other hand, the emotional theory would argue that children with autism lack the basic ability to experience true reciprocal relationships, with implications for difficulty in understanding the emotional aspect of loneliness.

The authors pose the questions whether children with autism do experience loneliness or are simply loners. Do they understand the emotional and the cognitive aspects of loneliness? A first step is to determine whether these children do have friends or understand the meaning of friendship, and reference is made to Hobson (1993) who suggests that autistic individuals somehow stand alongside social relationships and simply observe behaviour, thus failing to grasp what friendship means.

Their own study set out to examine the constructs of loneliness and friendship in children with autism. Their sample included twenty two children between the ages of eight and fourteen, compared to a control group matched for measured ability and parental education.

Only one girl was present in the target sample but this disparity was accepted partly because autism is much more common among boys and partly because, when girls are affected, they are likely to be severely retarded. Therefore, in a sample of children with high functioning autism (IQ scores ranged from 84 to 138 ) there would be significantly more boys than girls.

The children completed the Loneliness Rating Scale ( Asher et al 1984 ), a self report scale involving 24 items, such as 'I have nobody to talk to in class', to be rated from 'not true at all' to 'always true'.

The children were also asked to describe what being lonely means, and the resulting definitions were coded according to their emotional or cognitive content.... i.e. whether the responses indicated an emotional view of loneliness, illustrated by references to sadness or fearfulness; or whether there was a cognitive view, represented by comments about unfulfilled relationships.

Examples of loneliness were analysed in terms of internal vs. external locus of control, e.g. 'I don't know how to make friends' or 'I'm lonely at school because other children are mean'; and were separated into general or specific examples, e.g. 'I'm usually lonely at school' or 'Yesterday, no-one was at home in the afternoon'.

The Friendship Qualities Scale (Bukowski et al 1994) was also used, where the children rate a series of statements (such as 'My friend and I spend all our free time together') so that some measure is gained of 5 categories of friendship quality companionship, security-intimacy, trust, help, and conflict.

Finally, parental reports were obtained in respect of the number of friends their autistic child appeared to have, what types of activities were engaged in, and how often the child had pre-arranged meetings with friends.

The results showed that, in respect of understanding/definitions of loneliness, the children with autism were significantly less likely than controls to provide a full definition. Only 30% of the target sample, compared to 74% of controls, referred to both the affective and social-cognitive components. It was the affective component that was commonly missing from the responses of the children with autism.

In respect of descriptions of occasions when they felt lonely, the two groups of children did not show any significant differences in the dimensions of the locus of control or of general versus specific descriptions.

On the loneliness rating scale, the autistic sample reported greater feelings of loneliness than did the typical children. Similarly, the autistic sample obtained lower mean scores for their definitions of friendship, so that only around 10% of the target group, compared to around 50% of the control group, included all the dimensions of friendship. Even if all the 22 autistic children claimed at least one good friend, there was still low scoring in respect of perceived companionship or security or help.

In the maternal reports, there seemed to be perceptions of greater numbers of friends than reported by the children themselves, but there were also consistent findings in terms of the frequency of desired relationships rather than actual relationships (e.g. 'He says that X is his friend, but X ignores him most of the time') ; and friendships seemed to involve activities, such as video games, which involved minimal direct interaction.

Further, interactions took place at home or school with the autistic children rarely invited elsewhere; and among the friends of the autistic sample, there was a high probability that the children concerned would have special educational needs themselves, or would be relatives of the children with autism.

The authors, in their discussion, held that children with autism can and do feel lonely, despite the common belief that these children prefer to be alone. At least among this high-functioning group, the findings suggest a social desire for involvement in relationships with others... supported by the observation that all the autistic sample reported having at least one friend. Accordingly, loneliness appeared to be experienced by the autistic children more frequently and more intensely than by the normally developing children.

To explain this finding, the authors ponder whether the autistic child understands loneliness differently from typical children, viz., while typical children understand loneliness as having no-one to play with *and* having feelings of sadness, the child with autism may focus simply on the dimension of being alone and does not add any emotional elements to the definition.

Alternatively, it may be that there are differences in the perceived meaning of friendship. While typical children may define a friend in terms of companionship or affection, the children with autism may include such dimensions less frequently. Autistic friendships may be of poor quality so that the children in question do not gain the feelings of security or companionship which are required to reduce feelings of loneliness.

However, the authors point out that children with autism were similar to the typical children on ratings of 'closeness' which might well include a sense of affection or specialness in the perceived relationship. On the other hand, closeness may have been highly rated on the basis of the *desired* rather than the *actual* situation.

In any event, the findings suggest that understanding and reports of loneliness and friendship were closely linked in typical children but not in children with autism. In other words, the typical child will know what a friend is and will also understand what it means when no friend is available. The children with autism may appear to understand what friendship means but such an understanding is not used to reduce feelings of loneliness.

Therefore, the findings tend to offer little support for the cognitive view of core deficits in autism. That this, to feel lonely, the child would need to be able to see himself through the eyes of other people or to recognise the lack of another person to fulfil his own emotional needs. Instead, the findings support the affective view of autism, since the children lack an understanding of the emotional aspects both of loneliness and of friendship.

The authors conclude that an important finding is that of the perception of children with high functioning autism as having friends, even if there may be some question over these self reports, and a confounding of the desired with the actual circumstances.

It is suggested that there has been relatively little focus upon the high functioning group of children with autism and their day to day needs, but their emotional or social difficulties should not be underestimated.

The implication is that the reports of greater loneliness or less satisfaction with friendships are a cause for concern, and that the children in question may benefit from specific treatment programmes designed to enhance social knowledge and social skills (and their presence in mainstream schools does not necessarily pre-suppose their ability to be fully integrated therein).

## **Intensive Interaction and Autism**

Neatly following from the above is the work of Nind and Powell (2000) who explore, albeit theoretically rather than empirically, the question whether children with autism can gain from a 'naturalistic' method of enhancing sociability and communication.

They begin by quoting Jordan et al (1998) who have explored what research evidence there is about the efficacy of 'intensive interaction' involving children with autism with the finding that there is some support for the principles underlying such an approach, but empirical data are very limited. Nevertheless, it is still argued that a theoretical analysis of the possible relevance of intensive interaction for autism would usefully be pursued given that social ability and communication are at the core of autistic difficulties.

The authors supply some background to intensive interaction, describing it as a teaching approach for children with severe and complex learning difficulties. It involves taking over the implicit style that relates to typical carer-infant interactions; and has, as a basic premise, the view that primary learning needs concern the ability to relate and to communicate with others

such that developments here will underpin subsequent development in all other areas. The processes within the interaction between carers and infants in the very early stages of development provide the model for promoting (social) learning.

A review of the literature has demonstrated that the normally developing infant is an active and competent participant in his or her own learning, and there is some emphasis of that research (e.g. Brinker and Lewis 1982) which demonstrates the significance of a responsive and child-oriented style of interacting. Interdependence, and a reciprocal and mutually enjoyable relationship are seen as the central features of the interaction. In other words, there is no specific skill that can somehow be taught; rather, it is a matter of a *style* of interaction which is characterised by the following necessarily features:

- Mutually enjoyable games and playful routines.
- Using the facial or vocal behaviours which infants typically elicit.
- The use of repetitive behaviours or changes in the timing of behaviours, while responding contingently to the child's behaviour rather than leading the child.

The overall goal is for interactions to develop in such a way that the child becomes increasingly able to reciprocate or to anticipate or to initiate communications. In working with infants with developmental disabilities, the establishment of interactions may not be automatic, and it may even be that the interactive style becomes quite different from that observed with typical children. For example, some lack in responsiveness in the infant may result in the carer's working all the harder, with the risk of being over stimulating or even intrusive in the attempt to gain some reaction from the child.

The atypical infant, therefore, may have a negative impact upon the carer's behaviour because the infant's responses may be difficult to arouse and the cues they give difficult to interpret. The major errors on the part of the carers ( according to Carlson and Bricker 1982 ) include responding at the wrong time in the child's behavioural cycle, responding too quickly, or providing stimulation which is not matched to the infant's developmental level. However, there is also evidence that mothers of developmentally disabled infants can be entirely responsive, and sensitive to their infants' behaviours, thus more likely to synchronise their own behaviours than might have been assumed.

There is particular interest in the break down of interaction in respect of children with autism, given the potential problems resulting from parents who try too hard to elicit responses and thus unwittingly deny children the opportunity to play their part in initiating as well as responding to 'overtures'. Breakdowns may arise because of problems in establishing joint attention, specific impairment in gaze monitoring or gaze shifting, and limited eye contact. Therefore, children with autism may not be directly amenable to the normal forms of nurturing behaviour which do depend upon some reciprocation.

The authors highlight five particular areas of difficulty among children with autism in respect of implementing the naturalistic approach of intensive interaction.

Firstly, children with autism have problems in giving and receiving signals in inter-personal interactions, with the implication for a need for great sensitivity among the carers to recognise signals of pleasure or anxiety given by the child. If the signals are misread, then the carer risk offering stimulation that may actually be of limited interest to the child or might even provoke

distress. In other words, carers may have to disregard some of the normal expectations or assumptions about typical adult-child interactions, with implications for an adaptation of the approach and reaction to the child as a fundamental principle.

Secondly, it may be necessary to recognise that attempts to engage the child may be too intrusive for him or her to tolerate. There is a need to harness the child's particular interest, and attempts to engage the children in some interactive game will only have a chance of success if the visual or auditory or tactile stimulation involved is within the child's existing behavioural repertoire or known sources of positive reinforcement. In other words, the carer must watch and wait to ensure that interactive attempts are not too advanced or unfamiliar or prolonged. One needs to avoid any arousal of anxiety in the child from social demands, particularly through sustained gaze or attention, or from pressure to respond.

Thirdly, children with autism cannot easily predict the world around them so that part of the appeal of repeated or ritualistic behaviour is the security and predictability. Increased predictability of actions can result in increased responsiveness. The problem is that there has been a tendency to regard 'structure' as a matter of the adult's control of events. However, in intensive interaction, the structure arises from the sharing of repetitive and familiar routines which provide a safe and predictable setting in which the child can explore the effects of his or her behaviour.

Fourthly, among normally developing infants, it is recognised that behaviours may carry the intention of initiating communication; but, among infants with autism, there may be an emphasis upon social deficits and a failure to attribute intentionality. Within the intensive interaction approach, the carer needs constantly to remember that the child may have the intention to communicate and an awareness of surrounding people and events even if such attributes are not obvious.

Finally, it is recognised that autistic patterns of behaviour may make the children difficult to teach or even to be with, so that their social isolation may be maintained. Some authors, such as Lovaas (1987) argue that stereotyped behaviours interfere with learning and they need to be eliminated. However, an alternative approach would hold that such behaviours have a social function; and the Option Approach uses the children's own behaviours as a starting point for showing responsiveness and giving the children some awareness of their own power over events. It may be necessary to accept and build on the interests or style of the infant with autism as a way of demonstrating a willingness to interact. One goes to meet the child, rather than expecting him or her to respond to the carer's demands.

In intensive interaction, the agenda would be set by the child, and it is the adult who responds to the child's behaviours which become the starting point, rather than the stumbling block, for learning.

In their conclusion, Nind and Powell (opp. cit) suggest that intense interaction may initially appear to lack the kind of structured instruction which children with autism may appear to need, but it does actually have an explicitness of its own so that, for example, the adults may be communicating very clearly how they feel and how those feelings are expressed in facial expression or actions. The communication may not be through spoken language but the meaning may still be demonstrated.

While stressing that they have adopted a purely theoretical perspective and that their views require empirical validation, the authors hold that children with autism can be helped to learn through this naturalistic process. Further, carers can learn to be facilitators of children's learning within an approach such as intensive interaction. This is not a matter of possessing some superior skill, but of using a naturally occurring social phenomenon and establishing the routine of responding to the particular learning needs and style of the child with autism even if this may mean disregarding 'normal' expectations or intuitions.

### **Signalling in Communication (Social Strengths of Non-Speaking Children)**

The research project completed by Whittaker and Reynolds (2000) is very timely in reinforcing some of the points made in the preceding summary.

In their introduction, they note how communication has been set down as a distinct diagnostic area, differentiable from social interaction. However, they argue that this differentiation is questionable when examining the social or communicative behaviour of those children with autism who do not use spoken language.

Reference is made by the authors to their earlier work which demonstrated how close proximity with the child was seen as a significant factor in maintaining interaction. Meanwhile they note how reviews of literature will tend to emphasise deficits in terms of lack of eye contact or poor joint attention. What matters is that the children may have *strengths* in terms, for example, of proximity seeking even towards passive and non-speaking adults, eye contact after being tickled, and general responsiveness to rough and tumble play.

They also refer to the studies of Sigman et al (1986) who confirmed that, compared to typically developing children, children with autism were significantly poorer in joint attention tasks and in pointing to an object which they wanted. *However*, during social games not involving objects, there was enhanced visual and physical contact.

In a similar study, Mundy et al (1986) showed how autistic infants showed significantly higher levels of responding and initiating in certain social interactions than children with specific language difficulties, namely reaching towards the adult after being tickled along with increased eye contact. These behaviours were at a similar level to those observed in typically developing children; and in respect of eye contact with a passive adult, the autistic infants produced a significantly higher response rate than either normal controls or the children with specific language difficulty.

The study of Whittaker and Reynolds (opp.cit) examined aspects of proximal communication in 4 boys with a mean age of 69 months diagnosed with autism and severe learning difficulties. All boys were working within the sensorimotor stage of the development and none of them could produce more than five single spoken words or signs. No imitation of vocal or gestural models from an adult was observed, indicative of a level of social responsiveness below five months. The goal of the study was to measure the frequency of intentional hand signalling during proximal communication sessions with an unfamiliar adult, compared with reported levels of intentional communication in the classroom.

All of the children had been found by school staff to take an adult<sup>1</sup>'s hand towards an activity, but neither hand signalling nor pointing behaviours had been observed. The children were videotaped in the sessions of proximal communication with an adult, in settings from which all distractors had been removed; and the study analysed 4 five-minute chunks of proximal communication randomly selected from the sessions for each of the children.

Elements of proximal communication include the building on the child's particular interests, approaching the child at a lower than eye level, using tickling or rough and tumble activities appropriate to the child's physical development, showing exaggerated facial expression and physical responses during activities, contrasting the above with a passive phase when any response from the child such as a hand signal is observed, responding to eye contact, shaping the reaching or touching responses by increasing the frequency of pauses, employing immediate echoing of the child's babbling, imitating the child's movements or actions, etc..

In the first session, the adult aimed to introduce a hand touching signal. The adult began in the active phase, tickling and spinning the child and then assuming a passive, crouched position in front of the child, holding out a hand towards the child. If the child did not respond by touching that hand within ten seconds, the adult guided the child to do so. Following this signal, the adult restarted the active phase of play. The sequence was repeated until the child was able to use the hand touching signal without any prompting. Having established the hand signal, the adult varied the rate of responding, sometimes pausing after only a few seconds of activity so the child had to initiate communication frequently via the signal in order to maintain the interaction.

Observations indicated that all the children showed high levels of unprompted intentional signalling (mean 35) with the adult over a total of 20 minutes of communication sessions. This compared with a mean of less than 7 intentional communications per hour reported within the classroom setting. It was recognised that there was considerable variation in the extent of signalling both between the boys and within each boy's performance over time; nevertheless the children showed much more intentional communication than they did in the normal classroom. Further, the signalling occurred within a context of increased eye contact, approach behaviour, and babbling.

The authors seek to explain these observations and begin by citing the social learning approach which links antecedent, behaviour, and consequence. However, they argue that this explanation does not fit the observed performance given the very rapid learning curve displayed by all 4 boys. Further, despite intervals of between one and three weeks between sessions when the behaviours were not reinforced, all 4 boys maintained that hand signalling behaviour and continued to use it at high frequencies without prompting or external reinforcement. These results are at odds with the outcomes observed in other social learning theory-based attempts to evoke communication behaviours in children with autism.

Alternatively, it is argued that the hand signalling procedure was already within the cognitive grasp of the children but what is significant *is* the piagetian concept of 'operational causality', whereby the children increasingly realise that events have causes and that they can influence events by their own behaviour.

In their discussion, Whittaker and Reynolds express the view that the role of the adult or carer is to attune to the child's level of understanding of social communication and not to expect the child to adapt to the adult level. The adult needs to approach the child and to interact with him or her in close proximity.

It is recognised that some adults may find it difficult to adopt this approach, especially with older children, partly because it may appear professionally inappropriate or somehow demeaning, or because they may be uncomfortable because of the close contact involved, especially given sensitivity to any suggestion of child abuse. The authors recognise this latter and ethical issue and recommend that any proximal communication work should be undertaken only after discussions with parents and care givers about the procedures involved.

Meanwhile, the authors also stress that it might be tantamount to a denial of the rights of children with severe autism if one did not attempt any procedure by which to increase their skills, particularly in terms of communicating their most basic needs. Proximal communication is perceived as a basis for establishing affective relationships, which might be combined with TEACCH approaches to give the child access to a flexible means of spontaneous communication.

In conclusion, it is noted that the deficits in respect of behaviour and communication in autism may well be exacerbated by deficits or constraints in the way in which adults perceive and work with children with autism. Instead of adopting a somewhat rigid or norm-based view of behavioural or communicatory goals, one needs to recognise the very different behavioural style and significant needs of children with autism, and to mould accordingly the way in which one determines individual goals and interventionist approaches.

### **Asperger Syndrome vs. High Functioning Autism**

As a brief and final point, one notes the work of Miller and Ozonoff (2000) whose study compared individuals with high functioning autism and those with Asperger Syndrome in intellectual, motor, visuo-spatial, and executive function skills.

The Asperger sample demonstrated significantly higher verbal and full-scale IQ scores, larger verbal-performance discrepancies, and better visual perceptual skills than those with high functioning autism.

However, once the superior intellectual abilities of the Asperger group had been controlled both by statistical analysis of co-variance and by examining IQ matched groups of children with Asperger syndrome and with high functioning autism, no significant differences in motor, visuospatial, or executive functions were observed, apart from a marginally significant trend in the Asperger sample towards poorer fine motor performance.

The authors concluded that Asperger Syndrome and high functioning autism may be one and the same thing and that separate diagnostic categories may not be warranted

### **REFERENCES**

- Asher S., Hymel S., and Renshaw P. 1984 Loneliness in children. *Child Development* 55 1456-1464
- Bauminger N. and Kasari C. 2000 Loneliness and friendship in high functioning children with autism. *Child Development* 71(2) 447-456
- Brinker R. and Lewis M. 1982 Discovering the competent handicapped infant. *Topics in Early Childhood Special Education* 2 1-16
- Bukowski W., Boivin M., and Hoza B. 1994 Measuring friendship quality during pre- and early adolescence. *Journal of Social and Personal Relationships* 11 471-484
- Carlson L. and Bricker D. 1982 Dyadic and contingent aspects of early communication intervention. In Bricker (Ed.) *Interventions with At-Risk and Handicapped Infants*. Baltimore : University Park Press.
- Connor M. 2000 Asperger Syndrome and the self reports of comprehensive school students. *Educational Psychology in Practice* (In Print)
- Hobson R. 1993 The emotional origins of social understanding. *Philosophical Psychology* 6 227-245
- Jordan R., Jones G., and Murray D. 1998 Educational interventions for children with autism. *Research Report RR77*. London : DfEE
- Kanner L. 1943 Autistic disturbance of affective contact. *Nervous Child* 2 217-250
- Lovaas O. 1987 Behavioural treatment and normal educational and intellectual functioning of young autistic children. *Journal of Consulting and Clinical Psychology* 55(1) 3-9
- Miller J. and Ozonoff S. 2000 The external validity of Asperger Syndrome. *Journal of Abnormal Psychology* 109(2) 227-238
- Mundy P., Sigman M., Ungerer J., and Sherman T. 1986 Defining the social deficits of autism. *Journal of Child Psychology and Psychiatry* 27 657-669
- Nind M. and Powell S. 2000 Intensive interaction and autism. *Children and Society* 14 98-109
- Sigman M., Mundy P., Sherman T., and Ungerer J. 1986 Social interactions of autistic, mentally retarded, and normal children and their caregivers. *Journal of Child Psychology and Psychiatry* 27 647-656
- Weiss R. 1973 *Loneliness : The Experience of Emotional and Social Isolation*. Cambridge MA; MIT Press
- Whittaker C. and Reynolds J. 2000 Hand signalling in dyadic proximal communication. *Child Language Teaching and Therapy* 16(1) 43-57

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