Shared Attention and Speech in Autism

Dinah KC Murray,   BA AM PhD

London, UK.

The primary theme of this short piece is that an immediate aim of much or most therapy in autism is the softening or relaxation of the super-aroused attention-tunnels which are central to the condition. Why is that a good idea? does it do more than alleviate the immediate symptoms of autism which cause *us* distress? Is it of benefit to individuals with autism, or just to us? As Pat Matthews put it in April (Durham 1996), when we try therapies for autism, "Who are they for ?" and as Stuart Powell asked (ibid.), "Do we have the right to try to change individuals with autism?" I support Pat's conclusions that the main thing is to try and change the environment. My emphasis here is on how to adapt the environments human element so as to put individuals with autism as much at ease as possible with those around them.

Can one of the benefits of therapy be the creation of conditions for forming a relationship in which there is give and take on both sides? In which mutual concern and other awareness can flourish? That generally is a central goal for anyone who cares for another person: that they should care in turn. Ought we to aim for that in relating with someone with autism? Can we help ourselves? - I feel that we cannot help wanting that, because its absence is the aspect of autism which hurts most, but we *can* refrain from trying to win it most of the normal ways -and perhaps win acceptance and the beginnings of concern thereby.   Again does that benefit individuals with autism or is it just for us? I believe that acceptance of others in a people-rich world must at least make life more comfortable, less distressing. At the same time, such acceptance will always be conditional upon the sensitive and considerate behaviour of others. It therefore takes effort from corers both to build and maintain it.

For a detailed account of my views on ordinary Vs autistic minds see Murray 1992,1993,1995. A brief sketch here will suffice to make sense of what follows. Most of us most of the time have multiply divided attention : many interests simultaneously alert and ready to digest information - we have **polytropic interest systems.** In this way we cope relatively easily with a highly changeable environment while building up a richly connected information store. With autism however, attention is tunnelled interest trapped: its objects isolated and without context - they have **monotropic interest systems.** That makes for an alarming and unpredictable universe, and a fragmented, disconnected, information store to cope with it.

This view fits very well with that expressed at Durham this year by Rutger van der Gaag of the Veldwijk Research Institute in the Netherlands, when he spoke of a "severely reduced information window". In this view, the higher the level of arousal, the narrower the information window; the more at ease the individual is the larger the information window. (See also Courchesne, Dawson Frith and Happé for arguments re attention and information-processing in autism).

A wider attention window potentiates relatively distributed and contextualised information-processing. It thus reduces vulnerability to shock via an enlarged capacity for reactive integration rather than merely via the narrowing of the range of available stimuli - which itself helps reduce arousal and widen the attention window. For those beneficial conditions to obtain the human element of that environment must behave non-normally. If we are trying to interact with individuals with autism, we are liable to intrude excessive stimuli and to disrupt predictable structures, just by being ourselves.

Reluctance to share attention is currently regarded as a crucial diagnostic feature of autism (Baron-Cohen). So are absence of Other-modelling (with its many repercussions), and difficulties with speech. None of the events which makeup shared attention is impossible for toddlers who are disabled solely by autism. They can raise their arms, they can extend their fingers separately, turn their heads, etc.; they can be aware of the presence of other people, and they can happen to share their

focus of attention, they do also sometimes have their attention diverted; in later development they may acquire the habit of following a pointing finger, and they generally show no impairment in geometrical awareness. Yet for some reason they are not like most non-autistic infants, enthusiasts for shared attention. They do not seek it out and they may shy from it. Why?

I think the difficulties with shared attention arise from two aspects of rigid monotropism or autistic attention-tunnelling.

- Firstly, **their strong, steeply focused interests naturally exclude attention from every exotropic stimulus** - be it a human being, a door slamming, a car coming. So **other people will not easily get into the child's awareness at-all** and, unlike most babies, such a child will not speedily acquire that readiness for interaction in which most of us are so adept. **Getting someone else to share their attention tunnel will simply not occur to them**

- Secondly, **when other people do succeed in diverting their attention tunnels strongly monotropic babies win find it an aversive experience.** Their attention tunnels may deepen as a result and a vicious circle may easily develop. The problem is compounded by the fact that there need be no overt signs of distress, avoidance mechanisms may be undetectable or not at-all-obvious.

Speech is a way of expressing one's interests which guarantees a degree of alignment in any (same-speaking) listener's interest system. It is a prime means of achieving shared attention. Shared attention is the sine qua non of communication. Except where there is a specific shared goal, dialogues normally have a leader and a follower, which may change as topics change. Therefore participating successfully entails being willing either to lead or follow, and acquiring skill in doing this is part of growing up. Being in the lead means having one's own use of language changing others' interest systems without them getting to change one's own. Turn taking, which makes conversation an exercise in co-operation rather than domination; depends on willingness to be led, willingness to have one's interests directed by an

other. If, as I believe, autistic individuals are particularly averse to being interest switched, there are strong therapeutic implications about use of speech especially, but not only, in the early years.

The more carers play a following role the more likely their charges are to relax rigid attention tunnels enough to potentiate comfortable Other-awareness. Is there a danger that this docile behaviour on the part of the carer may foster arrogance in the child? Given that much of the time such carer-behaviour is not an option - carers simply have to take control most of the time during childhood - I believe the contrary is true. From my experiences with Ferenc, and his unmistakable susceptibility to my concerns (see Murray, 1995), I believe that co-tropical friend-making can occur between an autistic and a non-autistic person. And I believe that may motivate steps towards Other-modelling and potentate the capacity to imagine Other viewpoints whilst retaining one's own, the capacity to be moved by anothers concerns (aka "Theory of Mind").

Is someone who successfully fosters that capacity in an autistic individual doing a proper and worthwhile thing? "A sense of well being is usually accepted to include the capacity to love our friends and family" (Land, 1995). How could we put up with all those people at close quarters if we didn't entertain friendly feelings towards them - and through those feelings, some capacity to anticipate their responses and some willingness to regulate our own accordingly? On those grounds, encouraging . someone to care seems a worthwhile aim. And since such feelings cannot be forced to grow, can only grow of themselves, it is also a proper aim. Even so, if that step were followed by the acquisition of those devious self-serving performance skills which tend to accompany adept other-modelling in most of us, then that new skill would also be a loss. Perhaps the sense of self (which depends on awareness of a distinction between and self and other) is too uncertain in anyone with autism for there to be a real risk here?

What is gained for the individuals who can now successfully engage with each other if this other-accepting state can be achieved is better communication and it gives

them the chance to exchange human warmth. That is a huge stimulus for most of us, it fills us with good cheer. So making opportunities for such exchanges is making opportunities for good feelings to flow back and forth between the individuals concerned. For children with autism those opportunities will have to be created by carers setting aside time in which the child's interests are paramount.

For carers, playing a following role may involve their paying extremely close attention to someone who is not trying to let them know what their current focus of interest is. Sharing time at a computer can be a very helpful route to successful interaction: the focus of attention is always visually obvious, though the intended response to it may still need some guesswork. In other contexts carers may have difficulty in discerning an autistic subject's interests, but sensitive attention should make good guesses possible.

What is involved in the sensitive co-tropical attention-giving that I am advocating? Without language to display the mind's directions how can we guess what is on someone's mind? Before language takes hold in a baby, the main route for its acquisition is carers picking up the infant's eye gaze, and adapting their verbal responses accordingly, and getting feedback from evident signs of interest or dissatisfaction - in fact getting feeling feedback (see Stern). Is that true of more adult non-verbal autistic individuals? Can we "read" their interests in more or less the same way?

In practice, we non-autistic people read each other's interests through and behind the screen of language. We read interests from people's actions, as well as their words - and understanding all the pragmatic, non-literal aspects of spoken exchange depends on our guesses about what each other's interests are. So, when we closely observe a person with autism who is doing whatever they feel like, it's not really more of a venture in the dark to guess what concerns them than it always is to guess an other's concerns. It may even be a little easier, given the lack of obfuscation in autism.

After a while carers who have made time for regular co-tropical interaction may find –
as I have certainly done with Ferenc – that the person with autism has developed
some detectable concern for the caring other. Such concern entails awareness of the
other's interests over time: others' distinct viewpoints are captured in interest-models
which give us quasi-independent feeling feedback. Most of us learn this other-
modelling early as part of trying to tune our own feelings in terms of other people's,
this being the most comfortable state for anyone. A strongly monotropic baby won't
know how to reach that harmony whatever anybody does

I maintain that the first problem of Other-awareness, ie. achieving just that **can** be
overcome without causing the second problem, i.e. achieving it at the expense of
autistic discomfort. I've called it co-tropicality, or there's the old saw, "start where
the child is", or there's Intensive interaction's "contingent responding" – they all
amount to joining the autistic individual in his or her attention tunnel, rather than
trying to get them to come out. The whole programme of the work Samantha
Watson was reporting at Durham – which introduced me to a therapeutic area I had
not previously encountered – seems to me perfect advice for the purpose of adapting
the human environment to suit individuals with autism. With that kind of approach, it
is possible that away from the strongly monotropic core of the autistic spectrum some
Other concern would eventually be motivated, and a relatively comfortable
accommodation to Others' viewpoints might eventually emerge.

<div align="center">

co-tropicality = the old saw,

"start where the child is", = Intensive interaction's

"contingent responding"

</div>

- they all amount to : **joining the autistic individual in his or her attention
tunnel** rather than trying to get them to come out.

Therapy in autism does not aim at a cure, does not aim at stopping anyone from being
the autistic person they are. It aims rather at an easement of the lives of these
vulnerable people through the provision of an environment in which they can flourish
(see also Matthews, this volume). That must include a learning environment in which

they are motivated to learn through their own explorations, in which the structure facilitates learning for them rather in obstructing it (Jordan & Powell 1996), in which staff are able to build on individuals' interests. The staff who do that successfully will be carrying out just the sort of therapeutic enterprise I have been describing, though they're officially in the education business - Jordan and Powell (this volume and op. cit.) are quite right to stress this overlap. It may be that the ideal therapist also subtly plays the role of educator, putting opportunities for safe exploration before the needy individual.

A computer has almost all the attributes of the ideal therapist for an autistic person (see table 1). And it can provide a common ground for communication (see table 2), a sort of neutral interface through which individuals' interests can be be revealed with beautiful clarity. Also, for most of us it's much easier to tune in to someone's involvement with a computer screen than their involvement, say, with their spittle filigree and its shimmering surfaces.

Table 1   Why computers suit autistic individuals

- **Contained,** very clear-cut boundary conditions

- naturally monotropic, (cf. Douglas Coupland's 'over focused')
thus **context-free**

- **restricted stimuli** in all sensory modalities

rule-governed and **predictable** thus **controllable**
[despite annoying mistakes]

- **safe error-making**
- **highly perfectible medium**
possibilities of **non-verbal** or **verbal expression**
interacts co-tropically with the individual, whether or
not anyone else is joining !

Table 2   Potential benefits*

- the autistic individual may become **motivated to speak,**
to the computer, or to an other

- anyone with autism is happy to accept **positive co-tropical attention:**
computer monitors, with their precise cursor movements,
greatly facilitate the would-be sharer's ability to recognise
the individual's current focus of interest,
i.e. computers make **joining in** really easy

- if someone else is joining in, they and their **co-tropical interventions**
maybe **highly welcome**

- the autistic individual's long-term acceptance and
concern for the sharer
may in turn greatly be enhanced by these interactions

- the autistic individual may become motivated to
show and share their **achievements**

- by presenting autistic individuals with outward manifestations
of their thoughts, computers may **potentiate reflection**
(Jordan and Powell; Donna Williams)

by giving autistic individuals power and scope as well as potentiating reflection,
it may greatly increase their
self-awareness, self-esteem, and optimism

- using a computer with an autistic individual may greatly
increase the sharer's respect and optimism,
by revealing unobvious **purposeful intelligence**

- in the long run, it may be that a level of **communicative competence**
can be achieved via the computer which enables broader
relationships to be formed via modems

- a sort of **'normalisation'** only recently available

* No space here to document these claims, for a fuller account see Powell

References :

Dawson G (Ed) (1989) Nature, Diagnosis and Treatment of Autism London : Guildford Press.

Frith U. (1989) Autism: Explaining the Enigma   Oxford : Blackwell

Happé F. (1994) Autism : An Introduction to Psychological Theory. London : UCL Press.

Jordan R.R. & Powell S.D. (1995) Understanding and Teaching Children with Autism   John Wiley & Sons Ltd.

Matthews P. (1996) this volume.

Murray D.K.C. (1985) Language and Interests Phd London : UCL Press

Murray D.K.C. (1992 ; 1993; 1995) Proceedings from the Durham Conference.

Powell S. (1996) this volume.

Watson S. (1996) this volume.