

# Diagnosis of Asperger Syndrome

Dr Tony Attwood

Perhaps the simplest way to understand Asperger's syndrome is that it describes someone who thinks and perceives the world differently to other people. Although we are only just beginning to describe and understand these differences, the unusual profile of abilities that we define as Asperger's syndrome has probably been an important and valuable characteristic of our species throughout evolution. It was not until the late twentieth century that we had a name to describe such individuals. We currently use the diagnostic term, Asperger's syndrome, based on the remarkably perceptive descriptions of Dr Hans Asperger, a Viennese paediatrician, who, in 1944, noticed that some of the children referred to his clinic had very similar personality characteristics and behaviour. By the mid 1940s, the psychological study of childhood in Europe and America had become a recognised and growing area of science with significant advances in theoretical models and assessment instruments, but Asperger could not find a description and explanation for the small group of similar and unusual children that he found intriguing. He suggested the term *autistische Psychopathen im Kindesalter*. A modern translation of the original German psychological term 'psychopathy' into current English terminology would be personality disorder - i.e. a description of someone's personality rather than a mental illness such as schizophrenia.

## The Diagnostic Assessment

An experienced clinician needs to conduct an assessment of the domains of social reasoning, the communication of emotions, language and cognitive abilities, interests, movement and coordination skills as well as examine aspects of sensory perception and self-care skills. Invaluable information can be obtained from reading and highlighting previous reports and assessments that identify characteristics associated with Asperger's syndrome, which can then be examined and confirmed during the diagnostic assessment. The diagnostic assessment will also include a review of the person's medical, developmental and family history (Klin *et al* 2000).

The diagnostic assessment for Asperger's syndrome requires a protocol, that is often developed by individual clinicians, that uses a 'script', or sequence of activities and tests, that determines whether the pattern of abilities in a particular domain are typical for a child of that age or adult, or indicative of developmental delay or deviance. The clinician may refer to a checklist of the characteristics of Asperger's syndrome that are included in the diagnostic criteria, and identified in the research literature or through extensive personal clinical experience as being typical of children or adults with Asperger's syndrome.

The full diagnostic assessment can take an hour or more depending on the number and depth of the assessments of specific abilities. More experienced clinicians can significantly shorten the duration of the diagnostic assessment. We now have training in the diagnostic assessment of children and adults (Attwood 2004).

## The Diagnostic Assessment of Girls

The majority of children referred for a diagnostic assessment are boys. The author has conducted a regular diagnostic assessment clinic for children and adults with Asperger's syndrome in Brisbane, Australia, since 1992. A recent analysis of over one thousand referrals to the clinic over twelve years, established a ratio of males to females of 4 to 1. Unfortunately, current research studies have not investigated any differences in the clinical profile according to gender. However, the author has noted that girls with Asperger's syndrome may be more difficult to recognise and diagnose due to coping and camouflaging mechanisms, which can also be used by some boys.

One of the coping mechanisms is to learn how to act in a social setting, as described by Liane Holliday Willey in her autobiography, *Pretending to be Normal* (Willey 1999). The clinician perceives someone who appears able to develop a reciprocal conversation and to use appropriate affect and gestures during the interaction. However, further investigation may determine that the child adopted a social role and script, basing this persona on the characteristics of someone who would be reasonably socially skilled in the situation, and using intellectual abilities rather than intuition to determine what to say or do. A camouflaging strategy is to conceal confusion when playing with peers by politely declining invitations to join in until sure of what to do, so as not to make a conspicuous social error. The strategy is to wait, observe carefully, and only participate when sure what to do by imitating what the children have done previously. If the rules or nature of the game suddenly change, the child is lost.

Girls with Asperger's syndrome can develop the ability to 'disappear' in a large group, being on the periphery of social interaction. One woman with Asperger's syndrome said when recalling her childhood, that she felt as though she was 'on the outside looking in'. There can be other strategies to avoid active participation in class proceedings, such as being well-behaved and polite, thus being left alone by teachers and peers; or tactics to passively avoid cooperation and social inclusion at school and at home.

The author has also noted that girls with Asperger's syndrome are more likely than boys to be guided and protected by same gender peers. The girl with Asperger's syndrome is less likely to be fickle or 'bitchy' in friendships in comparison to other girls, and is more likely than boys to develop a close friendship with someone who demonstrates a maternal attachment to this socially naïve but 'safe' girl. These characteristics reduce the likelihood of being identified as having one of the main diagnostic criteria for Asperger's syndrome, namely a failure to develop peer

relationships. With girls, it is not a failure but a qualitative difference in this ability. The girl's problems with social understanding may only become conspicuous when her friend and mentor moves to another school.

The language and cognitive profile of girls with Asperger's syndrome may be the same as those of boys, but the special interests may not be as idiosyncratic or eccentric as can occur with some boys. Adults may consider there is nothing unusual about a girl who has an interest in horses, but the problem may be the intensity and dominance of the interest in her daily life: the young girl may have moved her mattress into the stable so that she can sleep next to the horse. If her interest is dolls, she may have over 50 Barbie dolls, but rarely includes other girls in her play. The motor coordination problems of girls may not be so conspicuous in the playground, and they are less likely to have developed the conduct problems that can prompt a referral for a diagnostic assessment for a boy. Thus, where a girl has developed the ability to conceal her signs of Asperger's syndrome in the playground and classroom, and even in the diagnostic assessment, parents, teachers and clinicians may fail to see any conspicuous characteristics of Asperger's syndrome. We need to explore more of what Ruth Baker, a woman with Asperger's syndrome, describes as 'the invisible end of the spectrum'.

## The Diagnostic Assessment of Adults

The diagnostic criteria were primarily written to identify the signs of Asperger's syndrome in children and as yet we do not have any adjustments to the criteria for the diagnosis of adults. The diagnostic assessment of adults will potentially present the clinician with several problems. There may be many years since the adult was a child and recollections of childhood by the adult and any relatives interviewed during the diagnostic assessment may be affected by the accuracy of long-term memory. An aid to memory and discussion may be the perusal of photographs of the adult as a child. Family photographs are usually taken during a social occasion, and this can provide an opportunity to notice if the child appears to be participating in the social interaction. Conversation during the diagnostic assessment can be about the event in the photograph and the person's competence and confidence in the situation. School reports can be useful in indicating any problems with both peer relationships, and learning abilities and behaviour at school.

We now have questionnaires to identify the ability and personality characteristics of adults with Asperger's syndrome, and the analysis of the responses and scores on these questionnaires can be extremely useful for the clinician (Baron-Cohen 2003). The author has found that it can be an advantage to have the person's questionnaire responses validated by a family member such as the person's mother or partner. The adult referred for a diagnostic assessment may provide a response based on his or her perception of their social abilities while someone who knows them well and does not have Asperger's syndrome may have a different opinion. For example, a man was asked about his friends when he was a child and whether other children would come to his home. He replied that children did come to his house, which would suggest

some degree of popularity and friendship. However, his mother replied that the children would visit, not to play with her son, but to play with his toys. He preferred to play by himself in the bedroom. A clinician will need to determine which response is the more accurate.

It is possible that the adult or adolescent will deliberately mislead the clinician for reasons of maintaining self-esteem or to avoid a diagnosis that may be perceived as a mental illness. Some adults may choose to conceal their difficulties in social interaction skills while others may consider that their abilities are quite normal, using the characteristics of a parent as the model of normal interaction skills. If the person had a dominant parent with the characteristics of Asperger's syndrome, this may have influenced the person's perception of normality.

During the diagnostic assessment the adult client may provide responses that appear to indicate empathy and ability with social reasoning, but on a more careful examination it may be clear that these responses, given after a fractional delay, were achieved by intellectual analysis rather than intuition. The cognitive processing required gives the impression of a contrived rather than natural response.

## Problems Associated with the Current DSM IV Diagnostic Criteria

The original inclusion of Asperger's disorder within the DSM was welcomed by clinicians as a wise decision, as was the decision to move the Pervasive Developmental Disorders, including autism and Asperger's syndrome, from Axis II, an axis for long-term, stable disorders with a relatively poor prognosis for improvement, to Axis I, which implies that the signs can improve with early intervention and treatment. However, there are problems with the actual diagnostic criteria in DSM IV, and especially the differential criteria in the manual that distinguish between a diagnosis of autism or Asperger's syndrome. It is important to recognise that the diagnostic criteria are still a work in progress.

### Language Delay

The current criteria in DSM IV have been criticised by speech pathologists with regard to the statement that for children and adults to achieve a diagnosis of Asperger's syndrome, 'There is no clinically significant general delay in language, e.g. single words used by age two years, communicative phrases used by age three years'. In other words, if there have been signs of early language delay, then the diagnosis should not be Asperger's syndrome, but autism, even if all the other criteria, developmental history (apart from language acquisition) and the current profile of abilities are met for Asperger's syndrome. Diane Twachtman-Cullen (1998), a speech pathologist with considerable experience of autism spectrum disorders, has criticised this exclusion criterion on the grounds that the term *clinically significant* is neither scientific nor precise and left to the judgement of clinicians without an operational definition. A further criticism is that research on the stages of early language

acquisition has established that single words emerge around the child's first birthday, communicative phrases at about 18 months of age and short sentences around two years. In fact, the DSM criteria describe a child who actually has a significant language delay.

Does the development of early language skills actually differentiate between adolescents with autism and an IQ within the normal range (i.e. High Functioning Autism), and Asperger's syndrome? Research has now been conducted on whether delayed language in children with autism can accurately predict later clinical symptoms. Four studies have cast considerable doubt over the use of early language delay as a differential criterion between High Functioning Autism and Asperger's syndrome (Eisenmajer *et al.* 1998; Mayes and Calhoun 2001; Howlin 2003; Manjiviona and Prior 1999). Any differences in language ability that are apparent in the pre-school years between children with autism and an IQ within the normal range, and those with Asperger's syndrome, has largely disappeared by early adolescence. Delayed development of language is actually one of the Gillberg and Gillberg diagnostic criteria for Asperger's syndrome (Gillberg and Gillberg 1989). Young children with typical autism who subsequently develop fluent language eventually have a profile of abilities that resemble the profile of children with Asperger's syndrome who did not have early language delay. The author's opinion, and that of many clinicians, is that early language delay is not an exclusion criterion for Asperger's syndrome and may actually be an inclusion criterion, as in the Gillberg criteria and that the focus during the diagnostic assessment should be on current language use (the pragmatic aspects of language) rather than the history of language development.

### Self-help Skills and Adaptive behaviour

The DSM IV criteria refer to children with Asperger's syndrome as having, in comparison to children with autism, 'No clinically significant delay in cognitive development, in the development of age-appropriate self-help skills, adaptive behaviour (other than in social interactions), and curiosity about the environment in childhood'. Clinical experience and research indicates that parents, especially mothers, of children and adolescents with Asperger's syndrome often have to provide verbal reminders and advice regarding self-help and daily living skills. This can range from help with problems with dexterity affecting activities such as using cutlery, to reminders regarding personal hygiene and dress sense, and encouragement with planning and time management skills. When parents complete a standardised assessment of self-care skills and adaptive functioning, such abilities in children with Asperger's syndrome are below the level expected for their age and intellectual ability (Smyrniotis 2002). Clinicians have also recognised significant problems with adaptive behaviour, especially with regard to anger management, anxiety and depression (Attwood 2003).

### A Hierarchical approach

The DSM guidelines are that if the criteria for autism are confirmed in a diagnostic assessment, then despite the child's cognitive, social, linguistic, motor and sensory abilities and interests being consistent with the descriptions of a child with Asperger's syndrome, a diagnosis of autism should take precedence over a diagnosis of Asperger's syndrome. Many clinicians, including the present author, have rejected the hierarchical rule. The general consensus among clinicians at present is that if the current profile of abilities of the child is consistent with the descriptions of Asperger's syndrome, then the diagnosis of Asperger's syndrome takes precedence over a diagnosis of autism. Thus, contrary to the DSM, if a child meets criteria for both autism and Asperger's syndrome, the child is usually given a diagnosis of Asperger's syndrome by clinicians (Mahoney *et al.* 1998).

## Compensatory and Adjustment Strategies to being Different

The author has identified four compensatory or adjustment strategies developed by young children with Asperger's syndrome to the realisation that they are different from other children. The strategy used will depend on the child's personality, experiences and circumstances. Those children who tend to internalise thoughts and feelings may develop signs of self-blame and depression, or alternatively use imagination and a fantasy life to create another world in which they are more successful. Those children who tend to externalise thoughts and feelings can either become arrogant and blame others for their difficulties, or view others not as the cause but the solution to their problems. Thus some psychological reactions can be constructive while others can lead to significant psychological problems. These are the four reactions that have been observed by the author.

### A Reactive Depression

Social ability and friendship skills are highly valued by peers and adults and not being successful in these areas can lead some children with Asperger's syndrome to internalise their thoughts and feelings by being overly apologetic, self-critical and increasingly socially withdrawn. The child, sometimes as young as six or seven years old, may develop a clinical depression as result of insight into being different and perceiving him- or herself as socially defective. Intellectually, the child has the ability to recognise his or her social isolation, but lacks social skills in comparison to intellectual and age peers, and does not know intuitively what to do to achieve social success. Brave attempts by the child to improve social integration with other children may be ridiculed and the child deliberately shunned. Teachers and parents may not be providing the necessary level of guidance and especially encouragement. The child desperately wants to be included and to have friends but does not know what to do.

There can be increased social withdrawal due to a lack of social competence that decreases the opportunities to develop social maturity and ability. The depression can

also affect motivation and energy for other previously enjoyable activities in the classroom and at home. There can be changes in sleep patterns and appetite, and a negative attitude that pervades all aspects of life and, in extreme cases, talk of suicide, or impulsive or planned suicide attempts.

## Escape into Imagination

A more constructive internalisation of thoughts and feelings of being socially defective can be to escape into imagination. These children develop vivid and complex imaginary worlds, sometimes with make-believe friends. In their imaginary worlds with imaginary people, these children are successful, socially and academically. Searching for an alternative world can lead some children to develop an interest in another country, culture, period of history or the world of animals, as described in the following passage by an adult with Asperger's syndrome.

*When I was about seven, I probably saw something in a book, which fascinated me and still does. Because it was like nothing I had ever seen before and totally unrelated and far removed from our world and our culture. That was Scandinavia and it's people. Because of it's foreignness it was totally alien and opposite to any one and any thing known to me. That was my escape, a dream world where nothing would remind me of daily life and all it had to throw at me. The people from this wonderful place look totally unlike any people in the "real world". Looking at these faces, I could not be reminded of anyone who might have humiliated, frightened or rebuked me. The bottom line is I was turning my back on real life and it's ability to hurt, and escaping.*

The interest in other cultures and worlds can explain the development of a special interest in geography, astronomy and science fiction, where a place or planet may be 'discovered', a place where the knowledge and abilities of the child with Asperger's syndrome are recognised and valued. Sometimes the degree of imaginative thought can lead to an interest in fiction, both as a reader and author. Some children, especially girls, with Asperger's syndrome can develop the ability to use imaginary friends, characters and worlds to write quite remarkable fiction. This could lead to success as an author of fiction, or as a travel journalist.

The escape into imagination can be a psychologically constructive adaptation, but there are risks of other people misinterpreting the child's intentions or state of mind. Hans Asperger wrote, with regard to one of the four children who became the basis of his thesis on autistic personality disorder, that:

*He was said to be an inveterate 'liar'. He did not lie in order to get out of something that he had done – this was certainly not his problem, as he always told the truth very brazenly – but he told long, fantastic stories, his confabulations becoming ever more strange and incoherent. He liked to tell fantastic stories, in which he always appeared*

*as the hero. He would tell his mother how he was praised by the teacher in front of the class, and other similar tales.* (Asperger 1944, p.51).

Under conditions of extreme stress the propensity to escape into an imaginary world can lead to an internal fantasy becoming a 'reality' for the person with Asperger's syndrome. The person may be considered as developing delusions and being out of touch with reality. This may result in a referral for a diagnostic assessment for schizophrenia, as occurred in the biography of Ben by Barbara LaSalle (2003).

## Denial and Arrogance

An alternative to internalising negative thoughts and feelings is to externalise the cause and solution to feeling different. The child can develop a form of over-compensation for feeling defective in social situations by denying that there is any problem, and by developing a sense of arrogance such that the 'fault' or problem is in other people. The child or adult goes into what the author describes as 'God Mode', an omnipotent person who never makes a mistake, cannot be wrong and whose intelligence must be worshipped. Such children can deny that they have any difficulties making friends, or reading social situations or someone's thoughts and intentions. They consider they do not need any special programs or to be treated differently from other children. They vehemently do not want to be referred to a psychologist or psychiatrist, and are convinced that they are not mad or stupid.

Nevertheless, the child does know, but will not publicly acknowledge, that he or she has limited social competence and is desperate to conceal any difficulties in order not to appear stupid. One strategy is to develop an attitude of denial and arrogance that can be of great concern to parents, teachers and psychologists. A lack of ability in social play with peers and in interactions with adults can result in the development of behaviours to achieve dominance and control in a social context; these include the use of intimidation, and an arrogant and inflexible attitude. Other children and parents are likely to capitulate to avoid yet another confrontation. The child can become 'intoxicated' by such power and dominance, which may lead to conduct problems.

When such children are confused as to the intentions of others or what to do in a social situation, or have made a conspicuous error, the resulting 'negative' emotion can lead to the misperception that the other person's actions were deliberately malicious. The response is to inflict equal discomfort, sometimes by physical retaliation: 'He hurt my feelings so I will hurt him'. Such children and some adults may ruminate for many years over past slights and injustices and seek resolution and revenge (Tantam 2000).

The compensatory mechanism of arrogance can also affect other aspects of social interaction. The child may have difficulty admitting being wrong and be notorious for arguing. Hans Asperger advised that:



*There is a great danger of getting involved in endless arguments with these children, be it in order to prove that they are wrong or to bring them towards some insight. This is especially true for parents, who frequently find themselves trapped in endless discussion. (Asperger 1944, p.48).*

There can be a remarkably accurate recall of what was said or done to prove a point, and no concession or acceptance of a compromise or a different perspective. Parents may consider that this characteristic could lead to a successful career as a defence lawyer in an adversarial court. Certainly the child has had a great deal of practice arguing his or her point.

Unfortunately, the arrogant attitude can further alienate the child from natural friendships, and denial and resistance towards remedial tuition can increase the gap between the child's social abilities and that of his or her peers. While we may understand why the child would develop these compensatory and adjustment strategies, the long-term consequences can have a significant effect on friendships and prospects for relationships and employment as an adult.

## Imitation

An intelligent and constructive compensatory mechanism is to observe and absorb the persona of those who are socially successful. Such children initially remain on the periphery of social play, watching and noting what to do. They may then re-enact the activities that they have observed in their own solitary play, using dolls, figures or imaginary friends at home. They are rehearsing, practising the script and their role, to achieve fluency and confidence before attempting to be included in real social situations. Some children can be remarkably astute in their observation abilities, copying gestures, tone of voice and mannerisms; they are developing the ability to be a natural actor. For example, in her autobiography, Liane Holliday Willey (1999) describes her technique.

*I could take part in the world as an observer. I was an avid observer. I was enthralled with the nuances of people's actions. In fact, I often found it desirable to become the other person. Not that I consciously set out to do that, rather it came as something I simply did. As if I had no choice in the matter. My mother tells me I was very good at capturing the essence and persona of people. (p.22)*

Becoming an expert mimic can have other advantages. The child may become popular for imitating the voice and persona of a teacher or character from television. The adolescent with Asperger's syndrome may apply knowledge acquired in drama classes to every day situations, determining who would be successful in this situation and adopting the persona of that person. The child or adult may remember the words and body postures of someone in a similar situation in real life or in a television program or film. The person then re-enacts the scene using 'borrowed' dialogue and

body language. There is a veneer of social success but on closer examination, the apparent social competence is not spontaneous or original but artificial and contrived. However, practice and success may improve the person's acting abilities such that acting becomes a possible career option.

There are two possible disadvantages. The first is observing and imitating popular but notorious models, for example, the school 'bad guys'. This group may accept the adolescent with Asperger's syndrome, who wears the group's 'uniform', speaks their language and knows their gestures and moral code; but this in turn may alienate the adolescent from more appropriate models. The group will probably recognise that the person with Asperger's syndrome is a fake, or 'try hard', who is probably not aware that he or she is being covertly ridiculed and 'set up'. The other disadvantage is that some psychologists and psychiatrists may consider that the person has signs of multiple personality disorder, and fail to recognise that this is a constructive adaptation to having Asperger's syndrome.

## Explaining the Diagnosis

### Should You Explain the Diagnosis to the Child?

The immediate answer is yes. Clinical experience indicates that it is extremely important that the diagnosis is explained as soon as possible and preferably before inappropriate compensatory mechanisms are developed. The child is then more likely to achieve self-acceptance, without unfair comparisons with other children, and be less likely to develop signs of an anxiety disorder, depression or conduct disorder.

### When and How do you Explain the Diagnosis?

At what age do you explain the diagnosis? Children who are younger than about eight years may not consider themselves as particularly different to their peers, and have difficulty understanding the concept of a developmental disorder as complex as Asperger's syndrome. The explanation for young children will need to be age appropriate and provide information that is relevant from the child's perspective. The main themes will be the benefits of programs to help the child make friends and enjoy playing with other children, and to help in learning and achieving success with school work. There can be a discussion and activities to explain the concept of individual differences, for example, those children in the class who find it easy to learn to read,

and others who find it more difficult. The clinician or parents can then explain that there is another form of reading, namely reading people and social situations, and that we have programs to help children who have this particular reading difficulty.

### The Attributes Activity

For children over the age of about eight years, the author has developed the Attributes Activity to explain the diagnosis to the child and family, including siblings and grandparents. The author arranges a gathering of family members, including the child or adolescent who has recently been diagnosed as having Asperger's syndrome. The first activity is to have temporarily attached to the wall of the room large sheets of paper, or to have the use of a large white board with coloured pens. Each sheet is divided into two columns, one column headed 'Qualities' and the other 'Difficulties'. The author suggests the child's mother or father as the first person to complete the activity, which involves identifying and listing both personal qualities and difficulties (these can include practical abilities, knowledge, personality and passions). After the first focus person has made his or her suggestions, which the clinician writes on the paper/board, the family add their own suggestions. The clinician ensures that this is a positive activity, commenting on the various attributes and ensuring that there are more qualities than difficulties. Another member of the family is then nominated or volunteers to suggest his or her qualities and difficulties. The child or adolescent with Asperger's syndrome is able to observe and participate, and understands what is expected when it is time for his or her turn.

Sometimes the person with Asperger's syndrome is reluctant to suggest, or may not consider him- or herself to have, many qualities or attributes. The family is encouraged to make suggestions and the clinician can nominate a few suggestions from knowledge of the person. There will need to be some care when nominating difficulties so that the person does not feel victimised. The following is a representation of the Attributes Activity for a child with Asperger's syndrome.

Qualities	Difficulties
Honest Determined An expert on insects and the Titanic Aware of sounds that others cannot hear Kind Forthright A loner (and happy to be so) A perfectionist A reliable friend Good at drawing Observant of details that others do not see Exceptional at remembering things that other people have forgotten Humorous in a unique way Advanced in the knowledge of mathematics Liked by adults	Accepting mistakes Making friends Taking advice Managing my anger Handwriting Knowing what someone is thinking Avoiding being teased Showing as much affection as other family members expect Tolerating specific sounds Explaining thoughts using speech Coping with surprises

The clinician comments on each quality and difficulty nominated by the child with Asperger's syndrome and then explains that scientists are often looking for patterns; when they find a consistent pattern, they like to give it a name. Reference is then made to Dr Hans Asperger who, over 60 years ago, saw at his clinic in Vienna many children whose characteristics he observed to be similar. He published the first clinical description that has become known as Asperger's syndrome.

The author usually says to the child, '*Congratulations, you have Asperger's syndrome*', and explains that this means he or she is not mad, bad or defective, but has a different way of thinking. The discussion continues with an explanation of how some of the child's talents or qualities are due to having Asperger's syndrome, such as his or her extensive knowledge about spark plugs, ability to draw with photographic realism, attention to detail and being naturally talented in mathematics. This is to introduce the benefits of having the characteristics of Asperger's syndrome.

The next stage is to discuss the difficulties and the strategies needed to improve specific abilities at home and at school. This can include the advantages of programs to improve social understanding, Cognitive Behaviour Therapy and/or medication that can help with emotion management, and ideas and encouragement to improve friendships. The clinician provides a summary of the person's qualities and difficulties that are due to having Asperger's syndrome, and mentions successful people in the areas of science, information technology, politics and the arts who benefited from the signs of Asperger's syndrome in their own profile of abilities.

The Attributes Activity can also be used with adults and family members or partner. If using the activity with a couple where one partner has Asperger's syndrome, the author asks the typical partner to explain his or her love for the partner with Asperger's syndrome, and what the appeal was when they first met. The author has noted that the attributes of the partner with Asperger's syndrome can include being physically attractive (the silent handsome stranger) and loyal, having a remarkable intellect and original ideas, being a man with a feminine side, being a challenge to get to know and, during the time of dating, being very attentive. As with all relationships, over time other attributes become more noticeable and some diminish, but a few of the relationship attributes can be explained as being associated with the characteristics of Asperger's syndrome in an adult.

When explaining the development of the profile of abilities associated with Asperger's syndrome to an adolescent or adult, the author sometimes uses the metaphor of a clearing in a forest. The clearing represents the development of the brain, and the emergence of plants and saplings in the clearing represents the development of different brain functions. In the clearing, one sapling grows very rapidly and creates a canopy above the other plants and a root structure that restrict access to sunshine and nutrients, thus inhibiting the growth of competing plants. The dominant sapling, which soon becomes a tree, represents the parts of the brain dedicated to social reasoning. If that 'social reasoning' sapling does not develop quickly and become dominant, then other trees, or abilities, may become stronger. These plants represent abilities in mechanical reasoning, music, art, mathematics and science, and the perception of sensory experiences. The person may then see Asperger's syndrome as an explanation of his or her talents as well as difficulties.

The Attributes Activity closes with explanation of some of the author's personal thoughts on Asperger's syndrome. Such individuals have different priorities, perception of the world and way of thinking. The brain is wired differently, not defectively. The person prioritises the pursuit of knowledge, perfection, truth, and the understanding of the physical world above feelings and interpersonal experiences. This can lead to valued talents but also vulnerabilities in the social world, and will affect self-esteem. The person will perceive the diagnosis according to how the clinician explains it.

## References

Asperger, H. (1944) 'Die Autistische Psychopathen im Kindesalter.' *Archiv fur Psychiatrie und Nervenkrankheiten* 177, 76-137.

Attwood, T. (2003) 'Frameworks for Behavioural Interventions.' *Child and Adolescent Psychiatric Clinics* 12, 65-86.

Attwood T. (2004) *Asperger's Diagnostic Assessment*. DVD published by Future Horizons, Arlington, Texas.

Baron-Cohen, S. (2003) *The Essential Difference: Men, Women and the Extreme Male Brain*. London: The Penguin Press.

Eisenmajer, R., Prior, M., Leekham, S., Wing, L., Ong, B., Gould, J. and Welham, M. (1998) 'Delayed language onset as a predictor of clinical symptoms in Pervasive Developmental Disorders.' *Journal of Autism and Developmental Disorders* 28, 527-533.

Gillberg, C. and Gillberg, I.C. (1989) 'Asperger Syndrome - Some epidemiological considerations : A research note.' *Journal of Child Psychology and Psychiatry* 30, 631-638.

Howlin, P. (2003) 'Outcome in high-functioning adults with autism with and without early language delays: implications for the differentiation between autism and Asperger syndrome.' *Journal of Autism and Developmental Disorders* 33, 3-13.

Klin, A., Sparrow, S., Marans, W., Carter, A. and Volkmar, F. (2000) 'Assessment issues in children and adolescents with Asperger syndrome.' In A. Klin, F. Volkmar and S. Sparrow (eds) *Asperger Syndrome*. New York: Guilford Press.

LaSalle, B. (2003) *Finding Ben: A mother's journey through the maze of Asperger's*. New York: Contemporary Books.

Mahoney, W.J., Szatmari, P., MacLean, J.E., Bryson, S.E., Bartolucci, G., Walter, S.D., Jones, M.B. and Zwaigenbaum, L. (1998) 'Reliability and accuracy of differentiating Pervasive Developmental Disorder subtypes.' *Journal of the American Academy of Child and Adolescent Psychiatry* 37, 278-285.

Manjiviona, J. and Prior, M. (1999) 'Neuropsychological profiles of children with Asperger syndrome and autism.' *Autism* 3, 327-356.

Mayes, S. and Calhoun, S.L. (2001) 'Non-significance of early speech delay in children with autism and normal intelligence and implications for DSM-IV Asperger's Disorder.' *Autism* 5, 81-94

Smyrnios, S. (2002) 'Adaptive Behaviour, Executive Functions and Theory of Mind in Children with Asperger's syndrome.' Thesis, Victoria University of Technology, Melbourne, Australia.

Tantam, D. (2000) 'Adolescence and adulthood of individuals with Asperger Syndrome.' In A. Klin, F. Volkmar and S. Sparrow (eds) *Asperger Syndrome*. New York: Guilford Press.

Twachtman-Cullen, D. (1998) 'Language and communication in High-Functioning Autism and Asperger Syndrome.' In E. Schopler, G. Mesibov and L. Kuncie (eds) *Asperger Syndrome or High-Functioning Autism*. New York: Plenum Press

Willy, L.H. (1999) *Pretending to be Normal: Living with Asperger's Syndrome*. London: Jessica Kingsley Publishers.