Many Faces of a Gifted Personality: Characteristics Along a Complex Gifted Spectrum

Mimi Wellisch and Jac Brown

Abstract: This article will explore previous attempts to categorise gifted children according to certain types, and examine attempts to find common gifted characteristics, including characteristics that may have resulted from adverse environmental and other influences affecting attachment security. The discussion will highlight the difficulty in identifying gifted children who have associated disorders, and propose that disorders can affect core gifted characteristics. If this were the case, then seemingly discrepant and unexpected behaviours in some gifted children may be explained by such disorders. It will be argued that characteristics can be reliably used to initially screen children for both giftedness and for more commonly associated disorders, including anxiety and ADHD. A screening tool, The Spectrum of Gifted Characteristics, includes characteristics of disorders more frequently associated with giftedness, characteristics associated with attachment, and predicted gifted characteristics when combined with separate disorders and attachment styles.

Keywords: personality, gifted spectrum, attachment, disorders, gifted characteristics, gifted identification, Theory of Positive Disintegration, twice exceptional children, maternal depression

The term personality is generally thought of as a dynamic and organized set of characteristics that uniquely influences a person's thoughts, feelings, motivations, behaviours (Rykmam, 2004), that are heritable and relatively stable by the age of 30 years (Costa & McCrae, 1992). However, recent research challenges the importance of such heritability, and even the stability at age 30 (Roberts, Walton, & Viechtbauer, 2006). For example, irritability, an aspect of neuroticism (McCrae, Costa, & Busch, 1986) and previously thought to be heritable, appears to be caused or called forth by maternal stress during pregnancy (Prior & Glaser, 2006; Rice, Jones, & Thapar, 2007). Caspi et al. (2003) have also produced evidence of gene x environment (G x E) interaction. It may, therefore, be more accurate to theorise that there are heritable personality tendencies that are either more or less receptive to environmental influences. How to identify the optimum environment that eventually helps create the gifted personality, or how to define giftedness itself are subjects yet to reach consensus amongst scholars. Freeman wrote in 2005 that there were more than one hundred suggested models of giftedness, and more have since been proposed. Gifted identification has also been difficult (VanTassel-Baska, 2005), not least due to the diversity found amongst gifted children, going some of the way to explain why defining the gifted personality has been so elusive.

This article will explore some of the attempts to define specific gifted personalities, and examine a variety of characteristics associated with giftedness including those that can be environmentally derived or influenced. Such characteristics, based on research, could be reliably used to initially screen children for both giftedness and the more commonly associated disorders. We will also argue that the diversity of characteristics, shaped by environmental and other factors, make up a spectrum of giftedness. To begin, let us take a brief look at some attempts to group children into gifted types in order to enable recognition of particular needs.

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ISSN 1869-0459 (print)/ ISSN 1869-2888 (online)
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http://www.iratde.org
Gifted Types

Roeppe (1982) suggested five types of gifted children. The types, based on their emotional needs, were the perfectionist, the child/adult, the winner of the competition, the self-critic, and the well-integrated child. Betts and Neihart (1988) suggested a theoretical concept of six recognisable profiles of gifted children that included their behaviour, feelings and needs. Their profiles were recently updated (Neihart & Betts, 2010) and are the successful, the creative, the underground, the at-risk, the twice/multi exceptional and the autonomous learner. Neither Roeppe nor Betts and Neihart made the claim that their groupings of gifted types were based on research. However, Neihart and Betts’s twice/multi exceptional and at-risk profiles are of particular interest, as they include characteristics not generally associated with gifted children. For example, they theorised that twice/multi exceptional children may have sloppy handwriting, try to avoid failures, may be stubborn, impatient, disruptive, confused, stressed, frustrated, feel discouraged, rejected, helpless, isolated; and that the at-risk child is angry, depressed, self-isolated, disruptive, and defensive. These negative characteristics may seem quite different to the common perception of children who are gifted. One particular personality theory, the Theory of Positive Disintegration, has been embraced by some scholars who have argued that the differentness of gifted children and their varying characteristics may be explained through this theory (Ackerman, 2009; Silverman, 2009).

Theory of Positive Disintegration (TPD)

Dabrowski’s Theory of Positive Disintegration (1972) can be applied to gifted individuals who, according to the TPD, have increased sensitivity of the neurons, detectable in one, some, or a total of five psychic overexitabilities (OEs) to stimuli. Piechowski (1997a) explains overexcitabilities as modes of experiencing, or channels for colours, textures, insights, visions, and experiences. The psychomotor, sensual, imaginational, intellectual, and emotional OEs, can also be used to predict developmental potential (DP). Each OE has its own particular characteristics, and the Imaginational, Intellectual and Emotional OEs are particularly pertinent to gifted children, as OE characteristics describe a heightened awareness and passion. For example, intellectual OE does not only signify high intellectual ability, but a love of solving problems, and a need to search for truth, and Imaginational OE includes a vivid imagination and inventiveness that can be expressed through thoughts, words or deeds. A strong drive is created through the OEs to achieve individuality through breakdown of psychological structures accompanied by strong anxieties and depression as a person progresses through five levels of development. The TPD involves other elements and as it is a complex theory, space does not allow for further elaboration, however, interested readers are encouraged to read more widely (Ackerman, 2009; Mendaglio, 2008).

OEs as Identifiers

OEs were lauded by some scholars in giftedness as an alternative or additional way to identify both potential and giftedness, and several instruments were designed with this in mind (Falk, Lind, Miller, Piechowski, & Silverman, 1999; Lysy & Piechowsky, 1983; Piechowsky, 1997b). However, they have proven to be less reliable than initially anticipated, with one result able to identify only 70.9 per cent of gifted participants (Ackerman, 1997). Carman (2011) concluded that although a personality-based measure may prove to be useful in identifying gifted children in the future, there is currently no such valid measure.

TPD and Twice-Exceptional Children

Some scholars have expressed concern that Attention Deficit Hyperactivity Disorder (ADHD) and other disorders may be misdiagnosed in gifted children with certain OE characteristics. Amend (2009), for example, raised the risk of OEs being mistaken as
disorders, and misdiagnosed, preventing children's further personal development. Anecdotal evidence indicates that such views, while they have merit, are often taken out of context and used to mythologise a romanticized version of the gifted personality by parents encouraged by less informed and practitioners, who normalise problem behaviours, that may then remain unaddressed. It is also possible that TPD-type therapy may not suit a particular problem, nor prevent further deterioration, a risk that requires the close monitoring of highly skilled practitioners. Antshel (2008), for example, whose research was carried out with the awareness that some scholars believed ADHD should not be diagnosed in gifted children, found instead that ADHD was legitimately diagnosed in children who were gifted, and that their diagnoses had similar educational implications as in children who were not gifted. Therefore, if problems arise that are unrelated to inappropriate educational provisions and TPD-type therapy is not the therapy of choice, then there are other evidence based therapies that can help reframe problems and assist the child to progress (Wellisch, Brown, Taylor, Knight, & Berresford, 2011).

Evidence is consistent that the majority of gifted children are well adjusted (Neihart, Reis, Robinson, & Moon, 2002). So how do the problems of some gifted children arise?

The Highly Sensitive Personality

Belsky and Pleuss (2009) posit that a negative, “difficult child” is conceivably of a genotypic influence, although this does not preclude the acquisition of a highly sensitive nervous system during gestation or experientially (Aron & Aron, 1997; Belsky, 2005). This heightened sensitivity makes these children more reactive, and therefore more susceptible to both positive and negative experiences – a hypothesis that can be likened to Dabrowski’s OEs. For example, Belsky and Pleuss (2009) found that children with difficult temperaments as infants were significantly affected by insensitive parenting and poor quality non-maternal care, and that they were more positively affected by sensitive parenting and high quality caregiving in comparison with children who were not identified as difficult when they were infants. We will examine research findings on some early environmental factors associated with adverse child outcomes, such as insecure attachment and maternal depression. We will then consider vulnerabilities specific to gifted children, and the effects of these factors in observable characteristics.

Attachment Theory and Maternal Depression

Attachment was first noted by Bowlby (1969), who observed that when babies and young children would feel threatened or uncomfortable they sought out their mothers, who would then respond. The term attachment refers to this special reciprocal relationship between baby and mother (Prior & Glaser, 2006). Bowlby (1969) theorized that children became either securely or insecurely attached and constructed internal working models or cognitive maps of social interaction based on their experience and responsiveness of their attachment figures. For example, if a mother was too intrusive, the child may copy this behaviour, and may also project this type of behaviour onto others. One study found that 74% of chronically depressed mothers had insecurely attached babies (McMahon, Barnett, Kowalenko, & Tennant, 2006). This is compared with approximately 33% for the general population (Prior & Glaser, 2006). Maternal depression at a key time in the baby’s development has been linked to disorders in attachment and less than optimal cognitive development (Cicchetti, Rogosch, & Toth, 1998) and socio-emotional adjustment (Wellisch, Brown, & Knight, 2011). Predictors of child vocabulary, for example, have been associated with the mother’s vocabulary (Snow, 1998) and negative effect on caregiving, which can then affect children’s language (Stein, Malmberg, Sylva, Barnes, & Leach, 2008). It may, therefore, also affect verbal IQ and social interaction, and may be a key cause of social difficulties experienced by gifted children. This notion appears to be supported by recent findings that depression appeared to be the most influential factor in their children’s later problems with peers and at school (Wellisch, Brown, & Knight, 2011). A recent study
(Wellisch, Brown, Taylor, Knight, Berresford, Campbell, et al., 2011) found that maternal depression was also associated with learning difficulties in gifted children in the area of handwriting. Other studies have found that children's handwriting can be an indicator of giftedness, and that the interaction between handwriting and concentration (e.g., attention) can be a significant indicator of underachievement (Stoeger, Ziegler, & Martzog, 2008; Stoeger & Ziegler, 2010). It is therefore conceivable that there is a connection between maternal depression, particularly during the first 12 months (Joseph, 1999), and language development, handwriting, and underachievement.

As has been outlined above, maternal depression at a key time in the life of a developing child may contribute to later learning difficulties and disorders. These may show themselves in learning disorders, other underachievement problems and in the social interactions of twice-exceptional children.

**Effect of Attachment Style on Intelligence**

A theme of two types of giftedness has been noted by several scholars. Basing her review on past research, Winner (2000) concluded that beside for gifted children who did well there was a group gifted in mathematics, visual arts, and music who may have enhanced right-hemisphere brain development. She also cited studies demonstrating that artist had a disproportionate incidence of language-related learning disorders, lacked interest in academic achievement, and were disproportionately diagnosed with manic depression (now known as Bipolar Disorders). Csikszentmihalyi and Csikszentmihalyi (1993) found one gifted type to be highly intelligent, effective and successful, coming from warm, supportive and stimulating families. The other type identified was highly creative (e.g., scientists, artists, musicians), individuals who had in many cases triumphed over early disruptions and traumatic circumstances, indicating that these two gifted types may overlap with secure and insecure attachment styles respectively. For example, insecure attachment and traumatic early experience may lead to permanent effects, with repercussions for some or all areas of development (Perry, Pollard, Blakley, Baker, & Vigilante, 1995). Ainsworth and Wittig (1969) identified two insecure attachment styles: the insecure ambivalent (sometimes also referred to as anxious), and the insecure avoidant style, although there is only one secure attachment style.

**Secure Attachment and Gifted Children**

A recent longitudinal study found that maternal support was strongly predictive of the size of the hippocampus in non-depressed school children (Luby et al., 2012). The hippocampus, an area in the brain related to learning, memory and coping with stress, was almost 10 per cent larger than in other children. Perry & Szalavitz (2006) observed that intelligence may enable and accelerate recovery from poor care taking once the environment improves, and that intelligent children may learn more quickly to associate pleasure with their mothers' responses, even when pleasurable interaction is in short supply. Intelligence may, therefore, be a protective factor, a suggestion also made by other experts from a variety of backgrounds (Fergusson, Lynskey, & Horwood, 1996; Gunnar, 1998; Johnson & Flake, 2007). If this were the case, we could expect to see more securely attached children in a gifted population than in a general sample. This was, in fact, the conclusion in a study of 65 Dutch middleclass children (Van Ijzendoorn & Van Vliet-Visser, 1988). A recent study involving eighty 7–10 year old children found that children with scores >IQ120 on any Wechsler Intelligence Scale for Children (WISC-IV; Wechsler, 2003) index or FSIQ were more likely to be securely attached (Wellisch, Brown, Taylor, Knight, Berresford, Campbell, et al., 2011). Although this difference was not significant, a power analysis indicated the finding would have reached significance with 150 participants.

**Secure Attachment Characteristics**

Although there has been a general conception that gifted children tend to be introverted
(Silverman, 2002; Winner, 2000), it is possible that only children who have been affected by insecure attachment and/or maternal depression may develop this characteristic. For example, a recent qualitative study with 11 mothers (Wellisch, Brown, & Knight, 2011) found that children with no adjustment problems were reported to be extraverts, whereas children who were identified with internalising problems tended to be introverted (see table 1). More research with a larger population is needed to confirm this finding.

Two other important characteristics of both secure attachment and giftedness are curiosity and persistence. Studies have found less curious and exploratory behaviour in humans and animals under adverse and deprived environments (Joseph 1999). Secure attachment calls forth a positive attitude (Greenberg, 1999), which in turn leads to higher levels of engagement and persistence (Blair, 2002).

Persistence is an essential characteristic in the manifestation of potential, and a factor in enduring practice to ensure achievement (Ericsson, Prietula, & Cokely, 2007). A similar characteristic, “task commitment” requires persistence, and is one of three defining identifiers of gifted children, according to Renzulli (2005). The results above, however, indicate that it would be possible to be gifted and at the same time lack in persistence due to early experience, generally seen in children known as gifted underachievers. A classical longitudinal study on gifted children found just two factors separating the most and least successful gifted individuals: Drive to achieve – requiring persistence – and all-round social and emotional adjustment (Terman & Oden, 1959). As we have seen, these are both associated with secure attachment.

Perfectionism is another characteristic often mentioned in relation to gifted children, and Speirs Neumeister and Finch (2006) found two types of perfectionism: adaptive and maladaptive. They found that adaptive perfectionism, involving the commitment to continue perfecting an ability, was associated with secure attachment, whereas maladaptive perfectionism, for example, setting unrealistically high standards was associated with insecure attachment.

In summary, secure attachment via a well-adjusted mother can be seen as natural precursors for giftedness as it promotes language and other aspects of development. Securely attached gifted children are likely to be extraverted, adaptive perfectionist, competent, socially and emotionally well balanced, curious, persistent, self-confident, and positive.

**Insecure Attachment Characteristics**

**Characteristics We Can Expect From an Insecure Anxious Gifted Child.** Anxious insecurely attached babies tend to cry more, and are immediately and intensely distressed when their mothers leave, but are not particularly comforted upon their return (Prior & Glaser, 2006). Insecure anxious children are less forceful, less confident, more withdrawn, more passive and more hesitant in relation to new experience than children who are securely attached (Prior & Glaser, 2006). Their learnt reluctance to attempt new experiences, and the anxiety and tendency to depression brought about by their insecure attachment style may affect both intellectual and all other potential.

Children’s negative traits (Perry & Szalavitz, 2006) are likely to stem from maternal depression and insecure attachment (McMahon et al., 2006). A recent study (Wellisch, Brown, Taylor, Knight, Berresford, Campbell, et al., 2011) found that children whose mothers reported being depressed had higher internalising and total problem scores on the Child Behavior Checklist (Achenbach & Rescorla,1991). Maternal depression has also been associated with poor school performance and underachievement (Leschied, Chiodo, Whitehead, & Hurley, 2005), subjects often linked with gifted children.

Speirs Neumeister and Finch (2006) reported that maladaptive perfectionism was associated with insecure attachment. Maladaptive perfectionism may show itself as habitual procrastination and frequent destruction of drawings or work due to dissatisfaction with consequent lack of productivity and underachievement.
What We Can Expect From the Insecure Avoidant Gifted Personality. The effects of early and ongoing attachment problems have proven difficult to remedy (even when the environment changes, for example, when the mother’s depression has been addressed), possibly due to the initial malorganisation of neural functions in the developing brain (Davidson, 1994; Joseph, 1999; Perry, 2002). These may be the residual issues that cause the problems in some gifted children.

Babies who are avoidantly insecure have been observed to explore equally well in the mother’s absence or presence, to seek little contact with mothers, and rarely show distress when their mothers leave (Prior & Glaser, 2006). When older, these children are angry, aggressive, more hostile than others, have more antisocial behaviours, more negative feelings, and are more likely to bully other children even as preschoolers. They are usually more demanding and commanding, more likely to have poor peer relationships, and to be depressed (Lyons-Ruth, Easterbrooks, & Cibelli, 1997). Insecurely attached children may also have ongoing problems that include learning disabilities, and psychological and behavioural problems. Motivation is also likely to be affected early in life. For example, when a baby’s needs are rarely met, “learnt helplessness” is the result, with the child eventually giving up, and withdrawing rather than persisting (Seligman, 1990).

Summary of Insecure Characteristics

In summary, insecure anxious attachment may result in the following characteristics: introverted, negative, a tendency to become anxious and depressed, and a reluctant to attempt new experiences. Although the anxiously attached may eventually achieve, both types of insecure attachment can share the characteristics of maladaptive perfectionism and underachievement. Additional characteristics related to insecure avoidant attachment also include hostile, angry, aggressive, demanding and commanding behaviours with antisocial behaviour with poor peer relationships.

Gifted Characteristics

The review of negative characteristics associated with attachment difficulties early in life appears to clarify the reason behind the difficulty in defining, identifying, and grouping gifted children. In order to reconcile these diversities, we need to examine the types of characteristics associated with giftedness regardless of diverse backgrounds or levels of giftedness.

Basic Gifted Characteristics

Frasier and Passow (1994), who were interested in promoting the development of children from diverse backgrounds, identified 10 core gifted characteristics, not all necessarily possessed by each individual. They were: Motivation, intense unusual interest, highly expressive communication skill, effective problem solving ability, excellent memory, inquiry (curiosity), quick grasp or insight, uses logic and reasoning, imagination or creativity, and able to convey and pick up humour. As well as being reliable characteristics for children of diverse backgrounds, they also appear to overlap with a selection of the characteristics identified by parents of highly and profoundly gifted children (Rogers & Silverman, 1997). In addition to these, high sensitivity (Rogers & Silverman, 1997; Silverman, 1998; 1983) has frequently been linked to giftedness, and ability to read fluently before school age has been identified as a reliable sign of the more highly gifted (Clark 1992; Rogers & Silverman, 1997).

It is important to note here that gifted characteristics are culturally defined, and some characteristics considered to be signs of giftedness in a minority culture may run counter to the dominant culture. For example, a significant characteristic of giftedness amongst Aboriginals in Western Australia is one-ness, or belonging with the mob (Cooper, 2005),
and the key for giftedness according to Maori values is the possession of exceptional skills in helping others (Bevan-Brown, 2005). Neither gifts would elicit competitiveness or a penchant for achievement in children from these cultures, although competitiveness and achievement are valued in Western culture, and may more easily catch a teacher’s attention. Teachers of a diverse group of children may therefore fail to look for or identify giftedness in some children who for cultural reasons are unwilling to demonstrate their abilities.

**Current Study and Socio-Emotional Characteristics**

The research focus of our current study (Wellisch, Brown, & Knight, 2011) was any parenting effect on children’s socio-emotional development, particularly the effect of maternal depression. Results indicate that gifted children may be vulnerable to being misunderstood due to their differentness. We found that gifted children were more likely to have clinical or borderline internalizing problems if their mothers had been depressed, and if they had been serially misunderstood in a variety of primary social contexts – at home, by peers, and in those educational settings that failed to provide appropriately for their advanced and different educational needs. However, these factors did not individually cause serious adjustment problems, and children who experienced isolated contexts of being misunderstood did not have adverse outcomes. There appeared to be an additive pattern of being misunderstood at home, rejected and bullied by peers of a different maturity and ability, and ongoing educational indifference and neglect that together contributed to some children’s chronic internalizing and externalizing problems.

**Differences in Basic Gifted Characteristics May Relate to Problems**

As has been demonstrated, the 12 identified gifted characteristics may not be sufficiently reliable to correctly screen gifted children with socio-emotional and other problems. These children may lack motivation, persistence, and sufficient attention for on-going interests in particular skills or topics, their language and communication skills may not be quite so advanced if their mothers have been depressed and withdrawn, and their memory may not be as sharp as could have been otherwise expected due to loss of confidence, when affected by anxiety or depression. In fact, they may only show a few of the gifted characteristics, and may, instead, exhibit some other characteristics, as already mentioned. This can be illustrated with data from our qualitative study, partially reported here. We were able to access quantitative data on the participants, collected when they participated in a previous larger study. Permission was obtained by the first author to search the interview transcripts, and the new data on comments mothers made about their children’s characteristics is reported here. Table 1 sets out the pattern of 17 characteristics as reported for five gifted children identified with borderline or clinical internalising problems, and for the remaining six children who were reported to be well adjusted.

Although the population for this research was small and care should be taken in generalising the findings, table 1 indicates that a gifted child with socio-emotional problems may present as a precocious developer with possible learning difficulties who is introverted, sensitive, highly creative, perfectionist, less likely to be sporty in the case of boys, more likely to have a keen sense of humour, a child who demonstrates occasional and inconsistent gifted characteristics.

Four of the five children with internalising scores had higher Perceptual Reasoning (PR) scores than their Verbal Comprehension (VC) sub-test scores on the WISC-IV. Silverman (2002) noted similar IQ discrepancies between the verbal and performance scores in the IQ tests of students she identified with ‘visual-spatial’ orientation, who thought in pictures and had difficulty in demonstrating their giftedness through achievement.
Table 1. Characteristics of Gifted Children With and Without Internalising Problems

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Internalising children(^a) (n=5)</th>
<th>Non-internalising children (n=6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easily Frustrated</td>
<td>Alex, Tom, Skye</td>
<td>Robert, Kate</td>
</tr>
<tr>
<td>Perfectionist</td>
<td>Alex, Tom, Skye</td>
<td>Robert</td>
</tr>
<tr>
<td>Intense</td>
<td>N/A</td>
<td>Robert, Natalie</td>
</tr>
<tr>
<td>Willfulness</td>
<td>Aaron</td>
<td>Steven, Kate, Jack, Natalie</td>
</tr>
<tr>
<td>Testing boundaries</td>
<td>Peter</td>
<td>Kate, Jack, Natalie</td>
</tr>
<tr>
<td>Sexually atypical behaviour</td>
<td>Alex, Tom</td>
<td>Steven, Kate, Robert</td>
</tr>
<tr>
<td>Persistent</td>
<td>Peter</td>
<td>N/A</td>
</tr>
<tr>
<td>GLD</td>
<td>Tom, Aaron, Skye</td>
<td>Steven</td>
</tr>
<tr>
<td>Great sense of humour</td>
<td>Tom, Aaron, Peter, Skye</td>
<td>N/A</td>
</tr>
<tr>
<td>Introvert</td>
<td>Alex, Tom, Aaron</td>
<td>Jack</td>
</tr>
<tr>
<td>Empathetic</td>
<td>Peter, Skye</td>
<td>Kate, Natalie</td>
</tr>
<tr>
<td>Creative</td>
<td>Peter, Aaron, Skye</td>
<td>Steven, Robert</td>
</tr>
<tr>
<td>Sensitive</td>
<td>Tom, Peter, Skye</td>
<td>Natalie</td>
</tr>
<tr>
<td>Extravert</td>
<td>Peter</td>
<td>Mark, Steven, Kate, Robert, Natalie</td>
</tr>
<tr>
<td>Precocious developer</td>
<td>Tom, Peter, Skye</td>
<td>Natalie</td>
</tr>
<tr>
<td>Great communicator</td>
<td>Peter, Skye</td>
<td>Mark, Steven, Kate, Natalie</td>
</tr>
<tr>
<td>Not sporty (boys)</td>
<td>Alex, Tom, Peter</td>
<td>Robert</td>
</tr>
</tbody>
</table>

\(^a\) Children with higher Perceptual Reasoning (PR) scores in comparison to their Verbal Comprehension (VC) scores on the WISC-IV were Jack, Alex, Tom, Aaron, Peter

\(^b\) Real names are not used

The Gifted Spectrum – A Conclusion

We have attempted to demonstrate in this article that children who are gifted may be difficult to define and identify without a clear concept of the complex factors and contexts that may be involved in their early development and their resulting characteristics and personalities. There appears to be some agreement about two specific expressions of giftedness (Csikszentmihaly & Csikszentmihaly, 1993; Winner, 2000) and as has been demonstrated, they may be accompanied by any number of diverse characteristics with a multitude of possible combinations. The first is the positive, well adjusted, resilient, intellectually gifted achiever, and the second may be anxious, introverted, creative, possibly mathematically or scientifically gifted, and susceptible to both positive and negative experiences that appear to determine level of adjustment and achievement (Belsky, 2005; Dabrowski, 1972; Winner, 2000).

A spectrum of gifted characteristics is proposed, based on current and relevant research (Appendix; DSM-5; American Psychiatric Association, 2013). The Spectrum of Characteristics can be used as an initial screening tool to aid early identification of children who may be gifted, although care should be taken to ensure it is not used for diagnosis. The Spectrum of Characteristics provides an overview of disorders, their tentative predicted effects on observable gifted characteristics based on the literature and authors' observations, and possible attachment styles. The tool should be used with caution, as children may have concurrent disorders, which may then alter the observable characteristics of giftedness. It is our hope that this screening tool will more precisely help identify children's abilities and needs within the spectrum of giftedness, so that they can be offered the adequate and appropriate educational and therapeutic support that may prevent underachievement and encourage them to blossom.
References


The Authors

Mimi Wellisch is a registered psychologist who is passionate about providing opportunities for gifted children. She also has a Master of Early Childhood from Macquarie University, where she is completing a PhD thesis on the connection between attachment and IQ. Mimi is the author of a number of books and peer reviewed and other articles, and has presented papers and workshops at many local and international conferences. She has also held the positions of President, Vice President, and Treasurer of the NSW Association for Gifted and Talented Children.

Dr. Jac Brown is a Senior Lecturer teaching in the area of clinical psychology at Macquarie University.
### Appendix

<table>
<thead>
<tr>
<th>DSM-5 Disorders</th>
<th>Length of Disorder Symptoms, Age and Other Conditions</th>
<th>Brief Summary of Characteristics Described in DSM-5</th>
<th>Observable Gifted Characteristics*</th>
<th>Attachment Characteristics*</th>
</tr>
</thead>
<tbody>
<tr>
<td>NIL</td>
<td>NIL</td>
<td>NIL</td>
<td>Motivation – Evidence of desire to learn</td>
<td>Secure Attachment: extraverted, competent, socially and emotionally well balanced, curious, persistent, self-confident, and positive.</td>
</tr>
<tr>
<td>NIL</td>
<td>NIL</td>
<td>NIL</td>
<td>Interests - intense, sometimes unusual</td>
<td></td>
</tr>
<tr>
<td>NIL</td>
<td>NIL</td>
<td>NIL</td>
<td>Communication skills – highly expressive with words, numbers or symbols</td>
<td></td>
</tr>
<tr>
<td>NIL</td>
<td>NIL</td>
<td>NIL</td>
<td>Problem solving – Effective, often inventive, strategies for recognizing and solving problems</td>
<td></td>
</tr>
<tr>
<td>NIL</td>
<td>NIL</td>
<td>NIL</td>
<td>Memory – Large storehouse of information on school or non-school topics</td>
<td></td>
</tr>
<tr>
<td>NIL</td>
<td>NIL</td>
<td>NIL</td>
<td>Inquiry – Questions, experiments, explores</td>
<td></td>
</tr>
<tr>
<td>NIL</td>
<td>NIL</td>
<td>NIL</td>
<td>Reasoning – logical approaches to figuring out solutions</td>
<td></td>
</tr>
<tr>
<td>NIL</td>
<td>NIL</td>
<td>NIL</td>
<td>Imagination, Creativity – Produces many ideas; highly original</td>
<td></td>
</tr>
<tr>
<td>NIL</td>
<td>NIL</td>
<td>NIL</td>
<td>Humour – conveys and picks up humour well</td>
<td></td>
</tr>
<tr>
<td>NIL</td>
<td>NIL</td>
<td>NIL</td>
<td>Sensitive – could be highly tuned into senses (may be positive or negative)</td>
<td></td>
</tr>
<tr>
<td>NIL</td>
<td>NIL</td>
<td>NIL</td>
<td>Able to read fluently before school (if highly or profoundly gifted)</td>
<td></td>
</tr>
<tr>
<td>NIL</td>
<td>NIL</td>
<td>NIL</td>
<td>May be a perfectionist (adaptive type, able to refine ability and striving to constantly improve)</td>
<td></td>
</tr>
<tr>
<td><strong>Attention-Deficit/Hyperactivity Disorder (ADHD)</strong></td>
<td>Symptoms present for at least 6 months prior to age 12 years. More common if also found in first degree biological relatives. Significantly impaired social or academic functioning. Co-occurs in 50% of cases with Oppositional Defiant Disorder, with Conduct Disorder in 25% of cases, and often with Specific Learning Disorder. Peers likely to reject and tease child with ADHD.</td>
<td>Inattentive: Difficulty in sustaining attention, easily distracted, often does not finish work, disorganised, does not seem to listen, avoids long-lasting activities (e.g., homework), forgetful, loses things.</td>
<td>Motivation – Enthusiasms to learn may be sporadic, may not finish work</td>
<td>N/A</td>
</tr>
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<td>Hyperactive and impulsive: Fidgets, taps hands or feet, frequently leaves seat, inappropriate running and climbing, blurs out answers or interrupts, inability to play quietly, often on the go, “driven like a motor”, intrudes on others, finds it difficult to wait for turn.</td>
<td>Interests, intense, sometimes unusual</td>
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<td>Communication skills – highly expressive with words, numbers or symbols</td>
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<td>Problem solving – Often inventive strategies for recognizing and solving problems although may not attend for sufficient length of time</td>
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<td>Memory – not applicable in practical situations, forgetful</td>
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<td>Inquiry – experiments, explores but may take risks, and may ask questions but not wait for answers</td>
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<td>Reasoning – logical approaches to figuring out solutions</td>
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<td>Imagination, Creativity – Produces many ideas; highly original</td>
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<td>Humour – conveys and picks up humour well although may be disruptive to others</td>
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<td>Sensitive – may be intolerant to certain smells, textures, sounds</td>
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<td><strong>Specific Learning Disorder (SLD)</strong>&lt;br&gt;Includes impairment in reading, written expression and mathematics.</td>
<td>Neurodevelopmental disorder with biological origin as basis for abnormalities at cognitive level. Persistent difficulty learning key-stone academic skills. Onset during years of formal schooling observed for at least 6 months. SLD, including Dyslexia, more common in first degree relatives. Learns to compensate. Often associated with ADHD, autism spectrum disorders, anxiety, depressive and bipolar disorders.</td>
<td>May have had delay in language or motor skills when younger, or was inattentive at preschool. May have oppositional behaviour and reluctance to engage in learning. Non-responsive to intervention, although may improve with evidence-based interventions.</td>
<td>Motivation – Desire to learn may be diminished due to low self esteem&lt;br&gt;Interests, intense, sometimes unusual&lt;br&gt;Communication skills – highly expressive with words, numbers or symbols, although may find it difficult to express in writing, and not in the area of LD&lt;br&gt;Problem solving – not in the area of LD and may have lost interest due to low self-esteem on account of LD&lt;br&gt;Memory – not in area of LD&lt;br&gt;Reasoning – may have been affected by LD and loss of confidence&lt;br&gt;Imagination, Creativity – Produces many ideas; highly original&lt;br&gt;Humour – conveys and picks up humour well&lt;br&gt;Sensitive – may be intolerant to certain smells, textures, sounds</td>
<td>Insecure Anxious Attachment: introverted, anxious, less forceful, less confident, more withdrawn, more passive and more hesitant, more likely to be diagnosed with internalizing disorders such as anxiety and depression.</td>
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<td><strong>Autism Spectrum Disorder Level 1 – 'requiring support’</strong>&lt;br&gt;Previously known as Asperger’s Disorder</td>
<td>Deficits in social communication. Typically recognised between 12 and 24 months of age. Functional language by 5 years. Four times more frequent in boys and between 37% and 80% heritability. Others in the family may be diagnosed or have similar symptoms. Interventions or compensations improve symptoms, but disorder will continue to cause impairment in social and, occupational areas of functioning. Seventy per cent have co-occurring disorder, for example as ADHD. Prone to anxiety and depression.</td>
<td>Delayed language development. Apparent lack of social interest. Appears deaf, but this is usually ruled out. Odd and repetitive behaviours. Socially naive and vulnerable. Inflexible, has difficulty switching between activities. Has non-verbal deficits and may speak in a stilted and overly literal language, with one-sided conversation lacking in reciprocity. When young, shows little or no initiation of social interaction, no sharing of emotions, and reduced or no imitation of others.</td>
<td>Motivation - Evidence of desire to learn&lt;br&gt;Interests, intense, sometimes unusual&lt;br&gt;Communication skills – advanced verbal ability, may speak with ‘posh’ accent, tending to deliver verbose monologues about topic of intense interest&lt;br&gt;Problem Solving Ability – effective, often inventive, strategies for recognising and solving problems&lt;br&gt;Memory – large storehouse of information, particularly on subject of intense interest&lt;br&gt;Inquiry – questions, but does not listen and tends to ask same question, again and again; experiments, explores&lt;br&gt;Reasoning – logical approaches to figuring out solutions&lt;br&gt;Sensitive – tendency to be hyper-sensitive to certain sounds, textures, and other sensory events&lt;br&gt;Able to read fluently before school (if highly or profoundly gifted)&lt;br&gt;May be perfectionist (most likely the maladaptive type, depends of current state of anxiety)</td>
<td>N/A</td>
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<td><strong>Disruptive Mood Dysregulation Disorder</strong></td>
<td>Onset between 6 to 10 years. Children predominantly male. Symptoms present for at least 12 months. Cannot co-occur with Oppositional Defiant Disorder (ODD) or bipolar disorder. Marked disruption in child’s family relationships and school performance, has trouble initiating and sustaining friendships. High rate of co-occurrence with many other disorders, including ADHD and Conduct Disorder.</td>
<td>Chronic and severe irritability, recurrent temper outbursts, verbal rages, physical aggression toward people or property grossly out of proportion to situation or provocation, and inconsistent with developmental level. Persistently angry most of the day.</td>
<td>May interfere with observable gifted characteristics. Between angry outbursts there may be <strong>glimpses of gifted characteristics</strong>. Child may also be unlikely to finish work, performing below ability in tests and assessments.</td>
<td><strong>Insecure Avoidant Attachment</strong>: hostile, angry, aggressive, antisocial behaviours, negative feelings, and likely to scapegoat and victimise other children, demanding and commanding, more likely to have poor peer relationships and suffer from depression.</td>
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<td><strong>Post-traumatic Stress Disorder (PTSD)</strong></td>
<td>Can occur at <strong>any age</strong> including first year of life. Symptoms usually begin <strong>within 3 months of trauma</strong>, although this may be delayed significantly. Recurrent distressing dreams, intrusive symptoms and memories, avoidance of activities or places. Can result in impaired functioning. Eighty per cent more likely than others to be diagnosed with at least one other mental disorder.</td>
<td>Self-blame, negative beliefs about self (“I am bad”), irritable, angry, aggressive, hyper-vigilant, exaggerated startle response, feeling detached from body and from others, prone to dissociation, difficulty sleeping. May re-enact scene of trauma repetitively through play.</td>
<td>May interfere with observable gifted characteristics. During periods of fatigue, anxiety, and depression there may be only <strong>glimpses of gifted characteristics</strong> as a result of lack of motivation. Child may also be unlikely to finish work, performing below ability in tests and assessments.</td>
<td><strong>Insecure Avoidant Attachment</strong>: hostile, angry, aggressive, antisocial behaviours, negative feelings, and likely to scapegoat and victimise other children, demanding and commanding, more likely to have poor peer relationships and suffer from depression.</td>
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<td><strong>Conduct Disorder (CD)</strong></td>
<td>Can be mild, moderate and severe. Onset <strong>before age 10 years, with behaviours present for the past 12 months</strong>. Typically male, physically aggressive to others, disturbed peer relationships, may have had Oppositional Defiant Disorder during early childhood. Often with co-occurring ADHD. More likely to develop Antisocial Personality Disorder when older.</td>
<td>Bullies others, fights, uses weapons, is cruel to animals or others, steals, sets fires, deceitful, skips school, can lack remorse and empathy.</td>
<td>Communication skills – highly expressive with words, numbers or symbols <strong>Problem solving</strong> – although not usually used for positive outcomes <strong>Imagination, Creativity</strong> – Produces many ideas; highly original, although may be used to lie to others <strong>Humour</strong> – conveys and picks up humour well, although may see humour in misfortune of others <strong>Sensitive</strong> – may be intolerant to certain smells, textures, sounds May be a <strong>perfectionist</strong> (maladaptive type, e.g. re-does and rips up work, procrastinates)</td>
<td><strong>Insecure Avoidant Attachment</strong>: hostile, angry, aggressive, antisocial behaviours, negative feelings, and likely to scapegoat and victimise other children, demanding and commanding, more likely to have poor peer relationships and suffer from depression.</td>
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| **Oppositional Defiant Disorder (ODD)** | Often results in significant emotional, social, and academic impairments. Commences in early childhood and if younger than 5 years, behaviour occurs on most days for at least 6 months, if older, behaviour at least weekly for diagnosis. Can occur in just one setting (e.g. home). More common with harsh, inconsistent or neglectful parenting. Can co-occur with Conduct Disorder, ADHD. As adults, at risk of antisocial behaviour, impulse-control problems, substance abuse, anxiety, and depression. | Frequent conflicts with parents, teachers, peers. Argumentative, loses temper, defiant or refuses to comply, annoys others, blames others for behaviour, annoyed by others, angry, spiteful, and resentful. | Communication skills – highly expressive with words, numbers or symbols  
Problem solving – Effective, often inventive, strategies for recognizing and solving problems, although not usually used for positive outcomes  
Imagination, Creativity – Produces many ideas; highly original, although may be used to lie to others  
Humor – conveys and picks up humor well, although may see humour in misfortune of others  
Sensitive – may be intolerant to certain smells, textures, sounds  
May be a perfectionist (maladaptive type, e.g. re-does and rips up work, procrastinates) | (continued from above)  
... likely to have poor peer relationships and suffer from depression. |
| **Generalized Anxiety Disorder (GAD)** | Excessive anxiety and worry compared to actual likelihood or impact of event. Twice as likely in females. Diagnosed if symptoms persist for at least 6 months, likely to also meet criteria for other anxiety and unipolar depressive disorders, and can be over-diagnosed in children instead of other anxiety disorders. Can co-occur with panic attacks. | Children tend to be overly conforming, perfectionists, unsure of themselves, worry excessively about their competence or quality of performance. Worry may shift from one concern to another. Anxiety is distressing. May be keyed up, restless, have muscle tension, be on edge, easily fatigued, have difficulty concentrating, mind going blank, be irritable, have disturbed sleep. May worry about catastrophic events like earthquakes or nuclear war. | Presence of the gifted characteristics of Motivation, Interest and Memory depends on level of anxiety, may show only glimpses, and these characteristics may be unstable due to anxiety.  
Communication skills – highly expressive with words, numbers or symbols, although may be shy  
Problem Solving Ability – effective, often inventive, strategies for recognising and solving problems  
Inquiry – questions, although can be tempered by shyness and less likely to experiment and explore  
Reasoning – logical approaches to figuring out solutions  
Imagination, Creativity – Produces many ideas; highly original  
Humour – conveys and picks up humour well  
Perfectionist (maladaptive type e.g., re-does and rips up work, procrastinates) | Insecure Anxious Attachment: introverted, anxious, less forceful, less confident, more withdrawn, more passive and more hesitant are more likely to be diagnosed with internalizing disorders such as anxiety and depression. |
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<td>Separation Anxiety Disorder</td>
<td>Clinically significant distress or impairment in social or other important areas of functioning. Early onset at preschool age or older. For diagnosis symptoms persist for at least 4 weeks in children. Equally common in males and females. In children highly co-occurring with General Anxiety Disorder (GAD) and specific phobia.</td>
<td>Excessive distress when separating from home or attachment figure, worry about losing them or harm coming to self or attachment figures (e.g. mother), and therefore reluctant or refuses to go to school or elsewhere, or to stay with others, or be alone, or to sleep without proximity to attachment figures. Nightmares about separation, headaches, stomach aches, nausea or vomiting when separated or when anticipating separation. Clinging behaviour, and shadowing of attachment figure.</td>
<td>Presence of the gifted characteristics of Motivation, Interest and Memory depends on level of anxiety, may show only glimpses, and these characteristics may be unstable due to anxiety. Communication skills – highly expressive with words, numbers or symbols, although may be shy Problem Solving Ability – effective, often inventive, strategies for recognising and solving problems Inquiry – questions, although can be tempered by shyness and less likely to experiment and explore Reasoning – logical approaches to figuring out solutions Imagination, Creativity – Produces many ideas; highly original Humour – conveys and picks up humour well May be a perfectionist (whether adaptive or maladaptive type depends of severity of anxiety)</td>
<td>Insecure Anxious Attachment: introverted, anxious, less forceful, less confident, more withdrawn, more passive and more hesitant are more likely to be diagnosed with internalizing disorders such as anxiety and depression.</td>
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<td>Obsessive-Compulsive Disorder (OCD)</td>
<td>More common in males during childhood and in females when older. Nearly 25% of males diagnosed before 10 years of age. Marked by dysfunctional beliefs, may not recognise obsession as excessive or unreasonable. If untreated, can be lifelong, with 40% in remission as adults. Often co-occurs with anxiety or depressive disorders. Interferes with routine, social activities, and relationships.</td>
<td>Reduced quality of life and high levels of social and occupational impairment, (e.g. avoidance of places, doctors or excessive hand washing in fear of contamination and high reliance on others). Repetitive rituals and compulsions are lengthy (e.g., more than 1 hour per day) and typically performed in response to obsessions (hand washing, ordering, counting, checking, hoarding) to prevent (unrealistic) dreaded event or situation.</td>
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<td>Major Depressive Disorder</td>
<td>At any age, change in behaviour over a 2-week period on most days marked by five or more of these symptoms: Depressed mood, diminished interest or pleasure in most activities, decrease or increase in appetite, insomnia or sleeping much more, physically agitated or much less active, fatigue and lack of energy, feeling worthless or inappropriately guilty, difficulty concentrating, recurrent thoughts of death.</td>
<td>Irritable, angry, blaming, frustrated over minor matters, feels sad, discouraged, hopeless, has difficulty making decisions, can have bodily aches and pains rather than showing or feeling sadness, slow in speech, thinking and bodily movements, avoids activity previously enjoyed, socially withdrawn.</td>
<td>During periods of depression child may show only glimpses of gifted characteristics as a result of lack of motivation, and is also unlikely to finish work, performing below ability in tests and assessments. If this behaviour is unusual for the child, an appointment should be made as soon as possible with a psychologist.</td>
<td>Insecure Anxious Attachment: introverted, anxious, less forceful, less confident, more withdrawn, more passive and more hesitant, are more likely to be diagnosed with internalizing disorders such as anxiety and depression.</td>
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