Supporting High-Functioning Autistic Spectrum Individuals in the Workplace

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Abstract
In 1994, the term Asperger Syndrome (AS) became part of the psychologist’s lexicon by its inclusion in the DSM-IV. Prior to that, the autistic spectrum (of which Asperger Syndrome is a part) meant profound autism (autism accompanied by mental retardation, often severe) and ‘high-functioning’ autism (autism without mental retardation).

Since AS’s inclusion in the DSM-IV, and probably not coincidentally, autism spectrum disorder (ASD) diagnoses are on the rise – the NIH now states that the prevalence for ASD is approximately 1:150. Controversy exists over whether or not the increase in diagnosis is due solely to better diagnostic tools and definitions or if the disorders are actually on the rise. Most experts agree that both are contributing factors.

However, to the person on the ‘high-functioning’ side of the autistic spectrum, labels and prevalence rates don’t matter. What does matter is the development and deployment of appropriate interventions and accommodations – in the home, school, and work environments – to help them live to their fullest potentials in a non-autistic, or ‘neurotypical’, world. This article looks specifically at vocational interventions and accommodations of use for the ‘high-functioning’ ASD worker.

Background – Review of Existing Literature
Although there is a wealth of information on interventions and accommodations for school-age children with high-functioning ASDs, there is very little information for adults with these disorders, and even less information specifically relating to vocational interventions or rehabilitation for ASD youth and adults.

Comprehensive and advanced searches of the Internet and ERIC (Education Resources Information Center, run by the US Department of Education) retrieved a paltry 17 scholarly and governmental articles on vocation and autism published since 1985, and the majority of these articles related to serving those with profound autism. Typical of these offerings:

*Teaching Janitorial Skills to Autistic Adolescents Elva Duran, 1985 – Abstract:*
Examined the efficacy of using three levels of prompts on three mentally retarded clients’ acquisition of 18 response sequences in cleaning a restroom. Subjects completed ten training sessions conducted once a week for one hour. Results indicated that the training was effective in teaching restroom cleaning skills.1

Clearly, these articles are of little use when working with high-functioning ASD individuals, and highlight the lack of understanding the vocational community has about

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their special needs. As the sole scholarly article discovered addressing Asperger Syndrome and vocational support states:

The majority of participants expressed dissatisfaction with [vocational] services...and reported that the services they received were neither adequately comprehensive nor tailored to meet the unique needs of individuals with ASDs.²

Clearly, there is much work here to be done. The few articles that were even vaguely applicable to ‘high-functioning’ ASDs and vocation included (most recent listed first):

- Supported employment improves cognitive performance in adults with Autism (2007)
- Vocational Supports for Individuals with Asperger Syndrome (2006)
- “I Do That for Everybody”: Supervising Employees with Autism (2005)
- Is Asperger Syndrome Necessarily Viewed as a Disability? (2002)

Some of the most useful information on careers and high-functioning autistic spectrum individuals comes from those with the disorders themselves:

- Employment for Individuals with Asperger Syndrome or Non-Verbal Learning Disability, Yvona Fast (Non-verbal Learning Disorder)
- Developing Talents, Temple Grandin (‘high-functioning’ Autism)
- Life and Love: Positive Strategies for Autistic Adults, Zosia Zaks (Asperger Syndrome)

These articles and books, along with others, were used in preparation of this paper, and are listed in the bibliography.

Discussion

In a controversial article, Simon Baron-Cohen (a well-known autism researcher and professor of developmental psychopathology at Cambridge University in the UK), puts forth the argument that Asperger Syndrome does not need to be viewed as a disability, but as a different way of viewing and adapting to the world.

While most of us are oriented toward people and social constructs, he posits, Asperger Syndrome individuals (and ‘high-functioning’ autistics) are more interested in things and systems. Baron-Cohen puts forth the model of empathizing-systemizing, and notes that while ASD individuals appear to have a deficit in empathizing (as demonstrated by poor social and communicative skills), they frequently excel at systemizing (demonstrated by their keen understanding of how inanimate objects and systems work).³

² Muller, E. et al. (2006). Vocational supports for individuals with Asperger syndrome. UC Berkeley, Berkeley, California, page 11.
Although the article is meant to destigmatize ASDs and challenge our notions of disability, it also serves to nicely to delineate the core differences in the way ‘normal’ or ‘neurotypical’ people orient themselves to the world, and how ASD, or ‘neurodiverse’, individuals orient themselves to the world. Baron-Cohen lists these 12 behaviors typical of ASD individuals:

1. Spends more time involved with objects and physical systems than with people.
2. Communicates less than others.
3. Tends to follow his or her own desires rather than being influenced by others.
4. Shows relatively little interest in what social groups are doing or in being a part of them.
5. Has strong, persistent interests.
7. Notices and recalls things others may not notice or recall.
8. Views of what is relevant may not coincide with what ‘normal’ people think is relevant.
9. May be fascinated with patterns: visual, numeric, alphanumeric, or taxonomic.
10. May be fascinated with systems: simple, complex, or abstract.
11. May have a strong drive to collect by category or taxonomy.
12. Strong preference for experiences that are controllable rather than unpredictable.

In turn, this list serves as a good backbone for developing vocational understanding of ASDs individuals, what their relative weaknesses and strengths are, and how to help them navigate the often very-social world of work:

*People on the ASD continuum – each one of us has a certain savant skill or collection of skills, and if we were allowed to, encouraged to indulge that vocationally to our heart’s content...we could come up with some amazing solutions for various workplace problems.*

Despite very real and often sought-after strengths and skills, particularly in mathematics, computer and physical sciences, engineering, music and linguistics, ASD individuals suffer from chronic unemployment or underemployment. In Eve Muller’s research, she notes that the ASD participants “had often prepared themselves for professional careers by completing graduate-level coursework, yet found themselves working in food services, or placed in low-level administrative or customer service positions doing simple, repetitive tasks.”

The two work environments where ASD individuals seem to excel are technology and academia – if they can adapt themselves to the neurotypical world well enough to get into

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4 Ibid., p 186.
these positions. As noted in the article *The Geek Syndrome* (Wired Magazine, December 2001): “The halls of academe have long been a forgiving environment for absentminded professors,” and most of us who have attended a four-year or post-graduate program will have no problem calling to mind one or more professors, research fellows, TAs, or interns who fit some if not all of the criteria for autistic spectrum disorders. But if academia and research facilities are suitable hosts for ASD individuals, so is the world of high technology:

*In the geek warrens of engineering and R&D, social graces are beside the point. You can be as off-the-wall as you want to be, but if your code is bulletproof, no one’s going to point out that you’ve been wearing the same shirt for two weeks.*

Indeed, at Silicon Valley companies such as Cisco Systems, Sun Microsystems, and IBM, programs for non-management track engineers have been in place for years, where truly gifted, yet often socially-awkward, engineers can continue to be rewarded and compensated with such plum benefits as sabbaticals, fellowships, and seats on international consortiums and standards organizations. At Cisco Systems in the 90s, brilliant engineers who lacked social skills or who could not get along with others were sent to what was euphemistically called ‘charm school’, where they were coached on interpersonal communication.

While these programs were not intentionally set up for ASD individuals, there is no doubt that more than a few autistic spectrum individuals have inadvertently benefited from them. The question is, if actually targeted to this population, how many more ASD individuals could be helped in the workplace?

**Relevant Theories and Assessments**

Most career development theories fall short in explaining the progress of autistic spectrum individuals through identifying, developing, and attaining career goals. Brown’s Values-Based Holistic Model, for example, relies heavily on personal introspection to determine the fit of values to career, *in context with the social world in which we live.*

This is not to say that ASD individuals don’t have values – they do – but they often lack the ability for personal introspection needed to understand how they fit into the social world around them, other than to feel that they don’t fit in at all. Indeed, the social world is often a mystery to them.

Potentially even damaging in the context of ASDs are theories such as Anne Roe’s Model of Parent-Child Interaction and how it pertains to career choice – that somehow parental influence is directly responsible for a child’s social interaction with the world.

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9 Ibid.
so close in implication to Bettelheim’s now-shunned ‘Refrigerator Mother’ theory
(Bettelheim, 1967), that it is both unhelpful in solving the very real problems faced by
ASD individuals, and misidentifies their social issues as generated by parental influence,
rather than as neurocognitive differences that can be moderated through intervention.

Listening to individuals with ASDs themselves points to the theories that make the most
sense. Repeatedly stated is that the job has to be a good ‘match’ to an autistic spectrum
individual’s particular strengths and weaknesses before loftier goals of their self-
actualization can even be contemplated\textsuperscript{12}. This points directly to Trait and Factor types of
theories and specifically, Holland’s theory of Person-Environment fit, which asks these
highly-relevant questions when working with a spectrum individual:

1. What personal and environmental characteristics lead to satisfying career
decisions, involvement, and achievement, and what characteristics lead to
indecision, dissatisfying decisions, or lack of accomplishment?
2. What personal environmental characteristics lead to stability or change in the kind
of level and work a person performs over a lifetime?
3. What are the most effective methods for providing assistance for people with
career problems?\textsuperscript{13}

ASD individuals frequently have no problem identifying the areas they are interested in –
in fact, their narrow focus of interest is a hallmark of these disorders. Additionally, these
individuals with typically high IQs may have secured the post-secondary education they
need to work in their areas of interest.

Indeed, it is often the vocation itself – the developed passion that comes most naturally to
an ASD individual – that drives the choice of career: “It is by developing our talents that
we can step more easily into the work world and find jobs that are a good fit for us.”\textsuperscript{14}
The key is to help mold those passions into a career or job.

When working with younger high-functioning ASD individuals who may not have yet hit
upon a ‘passion’, or for those ASD individuals who have more than one vocational
interest, the use of traditional interest and values assessments will probably work as well
as with their neurotypical counterparts. Given that the high-functioning ASD individual
has an average or above-average IQ, assessment tools developed for disabled populations
are not appropriate as they anticipate illiteracy or mental retardation on the part of the
test-taker (e.g., ABLE, WRIOT II, TWI).

One assessment tool that might work well with this population are SkillScan cards\textsuperscript{15} as
they play into the typical ASDs visual learning style and desire to sort and categorize, and

\textsuperscript{12} Muller, E. et al. (2006). \textit{Vocational supports for individuals with Asperger syndrome}. UC Berkeley,

\textsuperscript{13} Holland J. L. (1997). \textit{Making vocational choices: A theory of vocational personalities and work
environments}. (3rd Ed.). Odessa, FL: Psychological Assessment Resources.

Mission, Kansas, page 2.

the language is concrete and easy to comprehend. Additionally, using a tool such as the MBTI\textsuperscript{16} to develop an understanding of the individual’s learning and interpersonal style may be useful to help identify the types of jobs (e.g., working alone versus with some interaction) that are best suited for this particular individual.

Areas of concern in using any assessments are with any non-literal language used in the tool (‘describe things that make you feel warm and fuzzy’) or any requirement for imagination (‘imagine yourself as a cloud’) as these are noted weaknesses for ASD individuals. The counselor should review all assessments for this type of language, and either use a different tool, or offer to give assistance in understanding what this language means.

Unfortunately, the two most appropriate and useful assessments for these individuals do not yet exist:\textsuperscript{17}

1. **Assessing the individual for his/her relative adaptability to the neurotypical workplace** – given that these individuals are on a spectrum of ‘disability’, it is logical that each individual needs to be assessed as to how easily they can adapt to the neurotypical world of work, or their ‘neuroadaptability’.

2. **Assessing the workplace for the relative adaptability to the ASD individual** – given that workplaces vary drastically in their ‘tolerance of difference’, it is logical that each workplace needs to be assessed to determine if it is an appropriate fit for that ASD individual.

A functional assessment that determines the relative adaptability of the individual to the neurotypical work world might include the level and type of these potential areas of difficulty:

- Social communication
- Sensory sensitivities
- Processing abilities
- Organizational abilities
- Behavior management

An assessment of the fit of a workplace’s cultural fit for an ASDs individual might include:

- Demonstrated acceptance of diversity
- Non-management tracks for promotion of technical workers
- Focus on merit as primary criteria for promotion
- Flexibility in work hours
- Ability to telecommute
- Consistency in daily job duties/schedule


Supervisor’s willingness to make reasonable accommodations (incandescent lighting, written procedures, assign a job buddy)
Supervisor’s willingness to use multiple modes of communication (verbal, written, visual)

Until these assessments are developed, it will be up to the career counselor to informally assess for these strengths and weaknesses and develop a cohesive plan for the ASD individual that accommodates him/her appropriately.

**Relevant Counseling Techniques and Interventions**

As with any potential client, the career counselor works with an ASD individual in much the same way:

Humans are born with differing characteristics and predispositions at a given time and place...they grow up in an environment where innumerable unpredictable events occur...[and] generate events...to maximize their learning. The counselor’s job is to facilitate the learning of skills, interests, beliefs, values, work habits and personal qualities that enable each client to create a satisfying life.\(^\text{18}\)

The notable differences in working with an ASD individual is that in addition to developing a vocational plan, the counselor must also assess for ‘neuroadaptability’ and job match as well, using the key points noted in the previous section.

However, until such a time as standardized assessment tools are developed for this population, it is possible that career counselors may feel overwhelmed by this task unless they have had previous experience with autistic spectrum disorders. And in fact, ASD individuals often have “very little success with programs that endeavor to place disabled people into employment”\(^\text{19}\) due to their very specific strengths and weaknesses. To this end, the counselor may wish to ‘refer out’ if another agency or counselor is available who has the appropriate background.

Useful assessments and interventions for this population – before searching for a job – include:

- Identification of vocational interest, personality type, etc.
- Identification and intervention of social skills needs (refer out to Speech and Language Pragmatics Therapists in the area if needed)
- Eye gaze
- Greetings, introductions, and handshakes
- Interviewing techniques
- Identification of sensory sensitivities

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- Identification of processing and organizational difficulties (refer out to Occupational Therapists in the area if needed)
- Identification of behavior management issues (refer out to Cognitive-Based Therapists or other therapist in the area if needed)
- Emotions (sadness/rage/anxiety)
- Personal hygiene
- Distractability
- Inability to cope with any change in routine

Once the individual and the counselor have a good idea of the relative strengths and weaknesses, the next step is to develop a more ‘traditional’ job search plan. However, due to the typical organizational and processing difficulties this population has, the counselor will likely need to be more actively involved in the following steps than would be necessary with a ‘neurotypical’ client:20, 21

- Write a resume
- Develop an ‘elevator pitch’ (a 30-second description of what the person wants to do)
- Practice interviewing
- Practice telephone calls
- Practice writing ‘thank you for the interview’ notes
- Develop a worksheet detailing job search activities
- Practice/start networking

Career counselors cannot take for granted that these clients can handle these tasks on their own, that they will ask for help if needed, or that they can generalize the skills they have previously learned to new tasks, which are all noted difficulties for autistic spectrum individuals. It is key that the counselor regularly check in with these clients and work directly with them on all of these skills and work products.

Once the client has gained enough confidence to go out and seek interviews, the final step in this process is to help the client identify jobs and/or workplaces that would best suit his/her unique aspects, be it supported or competitive employment, by using the job match criteria:

- Demonstrated acceptance of diversity
- Non-management tracks for promotion of technical workers
- Focus on merit as primary criteria for promotion
- Flexibility in work hours
- Ability to telecommute

A company’s ‘culture’ can be determined both anecdotally through contacts who are working or have worked at this company, and through the company’s recruitment

literature or website. If a counselor is in doubt about a particular company’s fit, s/he can call the company and ask to speak to a person in recruiting. Of course, what a recruiter says and what the company actually does may be two different things, but it is a start.

When one or more job openings are found in companies that fit the right profile, the counselor should help the client begin the application and interview process, and check in regularly with the client to make sure s/he is following through on necessary tasks.

**Relevant Accommodations**

Prior to a job being offered, the counselor needs to help the ASD individual make two critical decisions:

- Should the individual disclose the disorder?
- Should the individual ask for accommodations prior to start of employment?

Answering these questions will depend on many different variables beyond the scope of this paper, but both need to be handled with extreme sensitivity by the counselor. Some ASD individuals advocate disclosure and others do not.22, 23 The counselor should also remember that the two questions are not necessarily interdependent: it is possible to not disclose the disorder but to ask – casually – for accommodations before or after accepting employment.

Typical and reasonable accommodations in the workplace for an ASD individual include:

- Assign a work buddy to help with both job task and social understanding
- Provide organizational tools or strategies
- Give frequent and direct feedback on job performance
- Give direct and specific direction, preferably in the ‘learning mode’ of choice (visual, auditory, tactile)
- Locate workspace in quiet area
- Allow frequent breaks to go ‘collect’ oneself
- Allow or provide incandescent lights, ear plugs, music, etc. to cut down on sensory problems

Probably the most key component for ASD individuals will be the maintenance of the relationship with the career counselor over time, to mentor, assist, and advocate for the ASD individual, especially when negotiating the workplace becomes difficult:

> [ASD individuals] felt strongly that they would not have been fired from their jobs if someone had been available to advocate for them, and help clear up misunderstandings.24

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While teaching self-advocacy and neurotypical adaptability is vital to success for these individuals, in some cases direct intervention on the part of a vocational or career counselor may be necessary. While this is normally beyond the scope of regular career counselor duties, and some employers may balk at having a third party intervene, it could make the difference between retaining employment and losing it for the ASD individual.

Further, there is clearly a need for training at the organizational level on supporting ASD individuals in the workplace:

...autism awareness [is] key...for employers and co-workers...communication breakdowns and firings could often be averted if supervisors had a better understanding of AS ...instead of being perceived as rude or aggressive [the] supervisor would realize that [the individual] was merely being unintentionally blunt.25

In many ways, the neurotypical world needs cultural sensitivity training to the world of autistic spectrum disorders and how the spectrum impacts the world of work. Clearly, there is a great deal more we can do professionally to help this population be successful.

Conclusion

Working with autistic spectrum individuals is in many ways quite different from working with other populations. Much of what we as career counselors might take for granted (the ability to easily make a phone call to a prospective employer, for example) may come at a great emotional cost for a person with ASDs.

However, we have a great deal to give to this population if we understand their particular needs: by providing individualized career and functional assessments, providing methods or resources to help develop neuroadaptability, providing a more hands-on approach to job search tasks, we can help break the current cycle of under and unemployment for high-functioning autistic spectrum individuals and help them attain satisfying careers.

In short, a career intervention for an ASD individual should follow a three-pronged approach:

- Identify or solidify vocational passions and interests
- Assess for functionality – refer out if needed
- Assess job for fit – coach the client or the company if and as needed

Throughout this work, we need to be mindful of the many special talents that ASD individuals bring to the world, and help to nurture these talents. As Parker Palmer states:

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We arrive in this world with birthright gifts – then we spend the first half of our lives abandoning them or letting others disabuse us of them...[then] we spend the second half trying to recover and reclaim the gift we once possessed.²⁶

Our job as counselors is to help these individuals reclaim their natural talents and effectively use them in the workplace.

**Relevant Resources**

The resources that would be of most use to career and vocational counselors are likely to be resources local to them. To that end, I’ve included a few resources in the San Francisco Bay Area that may be of use locally.

**Websites**

- OASIS (Online Asperger Syndrome Information and Support) is one of the oldest AS websites and is updated frequently. Contains many links to other sites as well as articles and information on AS.  
- Wrong Planet is a relatively new and very vital website aimed at promoting a community for AS individuals. Great information, often poignant.  
  [http://www.wrongplanet.net/](http://www.wrongplanet.net/)
- Tony Attwood is an internationally-acclaimed expert on AS, and pretty much anything he says, writes, or promotes is worthwhile.  
- The Global and Regional Asperger Syndrome Partnership’s website has great resources and interesting articles. Find them at  
- NLDline has also been on the web for a long time, and has a great deal of information that is relevant to the AS community.  

**Books**

- *Developing Talents*, Temple Grandin. A good book written by a woman with AS on how to choose a career.

**Local Services/Professionals**

- Michelle Garcia Winner is a local speech and language pathologist (SLP) who specializes in treating AS individuals. She is internationally known for her work and can be contacted at 408 557-8595 or visit her website at [www.socialthinking.com](http://www.socialthinking.com)
- Rondalyn Whitney is a local occupational therapist who works with AS kids and young adults. She can be contacted at 408 871-8711 or visit her website at [http://www.thelighthouseproject.com/](http://www.thelighthouseproject.com/)
- Toastmasters is a great way for AS folks to improve their communications skills. Find local chapters at [http://www.toastmasters.org/](http://www.toastmasters.org/)
- Foothill College has an Adaptive Learning center, which offers Transition To Work (TTW) classes. Visit [http://www.foothill.edu/al/](http://www.foothill.edu/al/) for information.
Bibliography


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