

The background of the slide features a sunset over a desert landscape. The sun is low on the horizon, creating a bright orange glow and silhouetting several large, flat-topped rock formations (mesas) against the sky. The sky is filled with soft, wispy clouds, and the overall color palette is dominated by warm tones of orange, yellow, and blue.

Building a Life Skills Tool Kit: Helping Prepare the Adolescent with Autism Spectrum Disorder for Adult Life

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In the effort to comply with the appropriate boards/associations, I declare that I do have affiliations with or financial interest in a commercial organization that could pose a conflict of interest with my presentation.

Building a Life Skills Tool Kit: Helping Prepare the Adolescent on the Autism Spectrum for Adult Life

Kevin T. Blake, Ph.D., P.L.C.

owns shares in the following companies:

Amgen, Inc.

Johnson & Johnson, Inc.

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Leading the Way in Professional Development.

www.CrossCountryEducation.com

Workshop Manual Layout

- **Workshop Slides (p. 1 - 121)**
- **Helpful Resources: Websites, Books, etc. (p. 122-131)**
- **Workshop Evaluation and scantron directions (p. 132-134)**



Seminar Updates

- Updates of this seminar, new information on Autism Spectrum Disorders, Learning Disorders, and AD/HD can be found at:

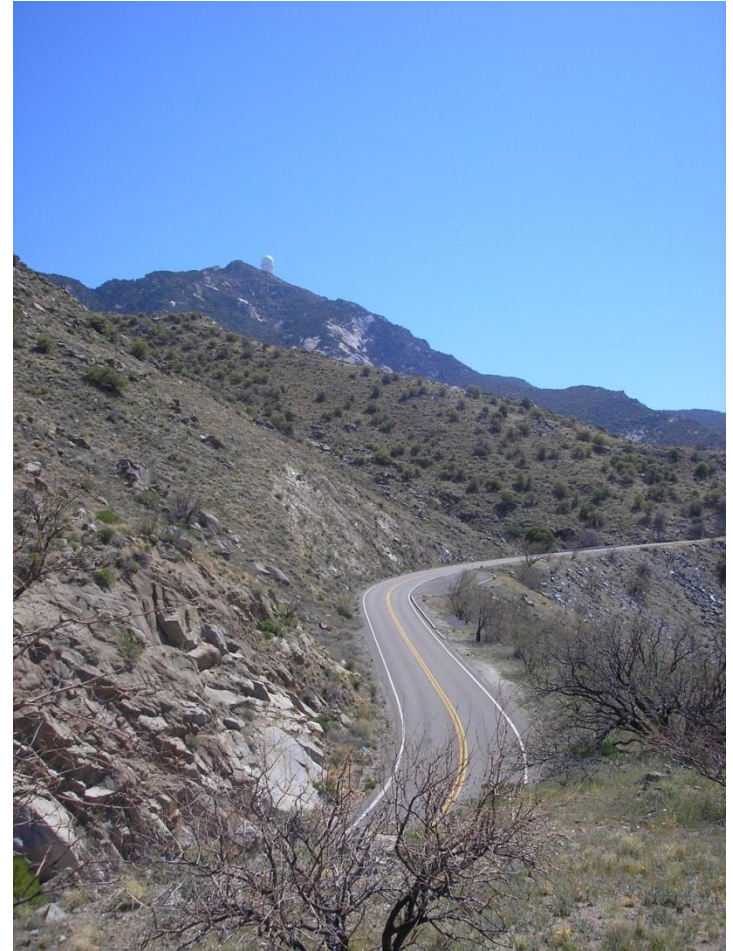
www.drkevintblake.com



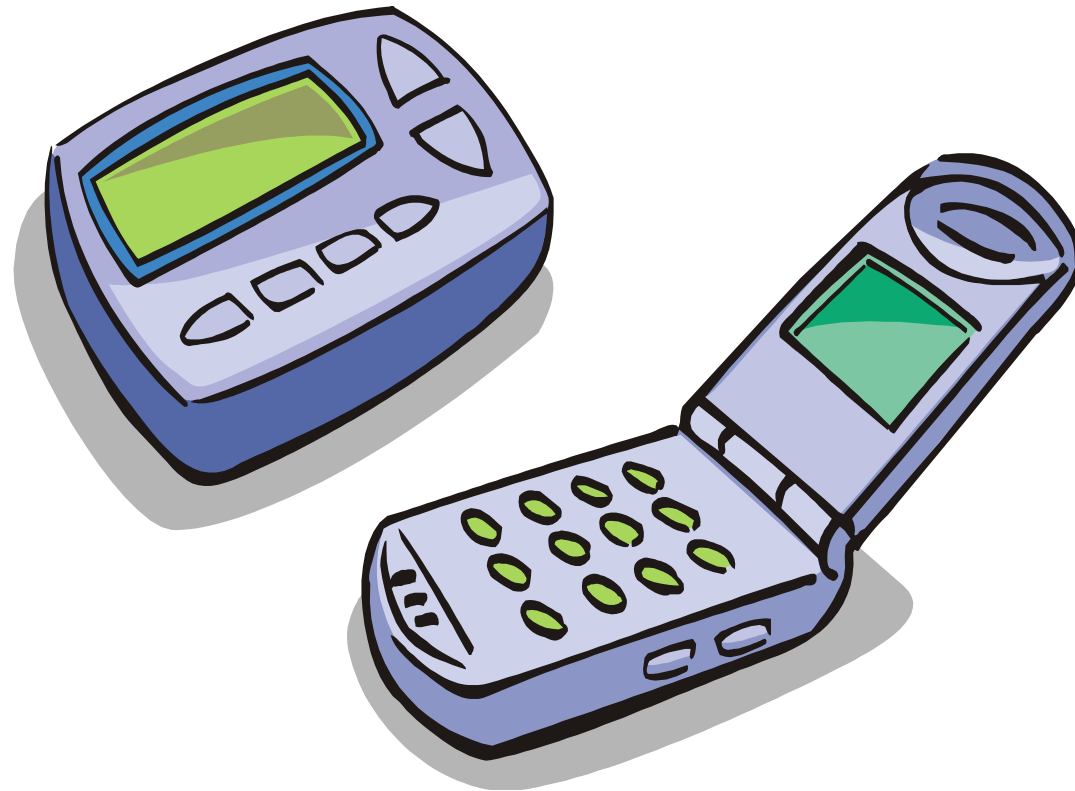
“Road Rules” and What To Expect

- **9:30 AM to 9:40 AM**
Break
- **11:30 AM to 12:30 PM**
Lunch: On your own
- **2:00 PM to 2:10 PM**
Break
- **3:30 PM Conclusion**

❖ ***I have 363 slides to present!***



PLEASE TURN OFF YOUR CELL PHONES AND PAGERS



Another Group of Professionals that Attend My Workshops

- ***Thieves!***

- Do not let your valuables out of your sight!
- If you leave your seat take your laptops, cell phones, purses, etc. with you!



Good Transitioning Primer for ASD Students

**Baker, J. (2005).
Preparing for Life: The
Complete Guide for
Transitioning to
Adulthood for Those
with Autism and
Asperger's Syndrome.
Arlington, TX: Future
Horizons.**



Excellent ASD Transitions Manual

Autism Speaks

Family Services

Transitions Tool Kit

Download free from

website:

http://www.autismspeaks.org/docs/family_services_docs/transition.pdf



Good Primer for Transitioning of Disabled Children

Ford, A. (2007). On Their Own: Creating an Independent Future for Your Adult Child with Learning Disabilities and ADHD. New York, NY: New Market.



Rajarshi (Tito) Mukhopadhyay High Functioning Nonverbal Adult With ASD



Rajarshi (Tito) Mukhopadhyay

“When he arrived at Elliot House, Tito’s observable behavior was exactly that of a mute child with classic autism, ignoring people but exploring objects that took his attention. Soma (his mother, sic.) settled him down and wrote the alphabet on a piece of paper. We asked questions and Tito pointed to the letters to spell his replies...”

Rajarshi (Tito) Mukhopadhyay

...he did this independently without any physical guidance from his mother. He replied to questions in full sentences, including long words used appropriately.”



Rajarshi (Tito) Mukhopadhyay



“...The contrast between Tito’s overt, typically autistic behavior – at one point he grabbed my hand to use it as a mechanical tool to turn a stiff door handle --and the sophistication of the language expressed through his alphabet board was truly amazing.” (Lorna Wing)

Wing, L. (1999). Forward. In Mukhopadhyay , T. R. (2011). The Mind Tree: A Miraculous Child Breaks the Silence of Autism. New York, NY: Arcade.

Rajarshi (Tito) Mukhopadhyay

“How can you remember things about such early days”, someone asked me. “Blame it on my sensory activities. It is the factor that led me to remember certain aspects of my early days, although I sometimes cannot remember who I met at the store yesterday.”

Mukhopadhyay, T.R. (2011). How Can I Talk If My Lips Don't Move? Inside My Autistic Mind. New York, NY: Arcade.

Rajarshi (Tito) Mukhopadhyay

“When I enter a new room, which I am entering for the first time and look at a door, I recognize it as a door, only after a few stages. The first thing I see is its color... I move to the shape of the door. And if at all I lay my eyes on the door hinge, I might get distracted by the functions of the levers...Why is that yellow, large rectangular objects with levers there?...And what else can it be, other than a door.”

Mukhopadhyay, T.R. (2011). How Can I Talk If My Lips Don't Move? Inside My Autistic Mind. New York, NY: Arcade.

Rajarshi (Tito) Mukhopadhyay

“To learn the sensation of physical pain, I had to mentally experience it. My mind needed to judge the location of the pain, the structure of the pain and the nature of the pain.”

Tito’s mother had to directly teach this to him.

Mukhopadhyay, T.R. (2011). How Can I Talk If My Lips Don’t Move? Inside My Autistic Mind. New York, NY: Arcade.

Poem 2



“Many things can happen in a minute, This or that, Some of this and some of that, All of this and none of that, or all of that and none of this. It depends on which you consider important, this or that.”(Rajarshi Mukhopadhyay)

Mukhopadhyay , T. R. (2011). The Mind Tree: A Miraculous Child Breaks the Silence of Autism. New York, NY: Arcade.

Soma Rapid Prompting Method (RPM)

Mukhopadhyay, S. (2008). Understanding Autism Through Rapid Prompting Method. Parker, CO: Outskirts.

Mukhopadhyay, T. R. (2011). The Mind Tree: A Miraculous Child Breaks the Silence of Autism. New York, NY: Arcade.

Mukhopadhyay, T.R. (2011). How Can I Talk If My Lips Don't Move? Inside My Autistic Mind. New York, NY: Arcade.

Estate Planning



National Accounting Office: 2009 ASD Report

❖ National Accounting Office of Great Britton reported in 2009:

- ½ of those with ASD in England met criteria for Intellectual Developmental Disorder
- Only 15 percent of those who have ASD were full-time employed

Burr, T. (May 28, 2009). Supporting People with Autism Through Adulthood. Comptroller and Auditor General (British) National Audit Office, Ordered by the House of Commons. London. Great Briton: The Stationary Office.
www.nao.org.uk/autismdvd.

ASD After High School

“For youth with an ASD, 34.7% had attended college and 55.1% had held paid employment during the first 6 years after high school. More than 50% of youth who had left high school in the past 2 years had no participation in employment or education. Youth with an ASD had the lowest rates of participation in employment and the highest rates of no participation compared with youth in other disability categories. Higher income and higher functional ability were associated with higher adjusted odds of participation in postsecondary employment and education.” (p. 1042)

Shattuck, P.T., Carter Narendorf, S. Cooper, B., Sterzing, P.R., Warner, M., and Lounds Taylor, J. (May 14, 2012). Postsecondary Education and Employment Among Youth With an Autism Spectrum Disorder. *Pediatrics*, 129, 1042-1049. From website: <http://www.clarionledger.com/assets/pdf/D0189267514.PDF>.

Charli Devenet: Adult on the Spectrum

“Although I have several advanced degrees, I have spent most of my life either unemployed or underemployed. By my mid-40s, I had learned to eke out a subsistence living by putting together a patchwork of part-time, low-paying jobs, all of which I was overqualified for. (p. 19)

- ❖ Charli has an Master of Arts Degree, Law degree and has passed the Bar**
- ❖ Charli works as a museum tour guide and legal researcher**

Grandin, T. (2012). Different...Not Less: Inspiring Stories of Achievement and Successful Employment From Adults with Autism, Asperger's and ADHD. Arlington, TX: Future Horizons.

Guardianships, Powers of Attorney, Etc.

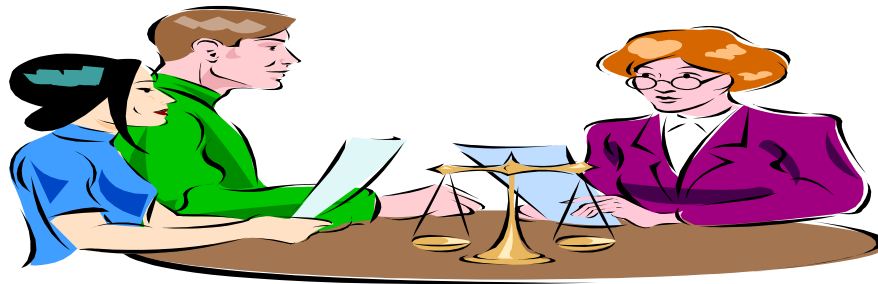
- **Guardianship:** Legal relationship created by court to take care of incompetent person.
- **Conservator/Guardian:** Name of person appointed by court.
- **Limited or Partial Guardianship/Temporary Guardianship.**
- **Durable Power of Attorney:** Can some make decisions for partially independent adult
- **Health Care Proxy:** Medical power of attorney
- **Joint Checking Account**

King-Nash, S. (April-May, 2010). Facing the Future: Guardianship, Conservatorship & More-Understanding the Options for your ASD Adult. Autism File, 43, 54-56.

Estate Planning

- The expert who should help you with this is a ***Certified Elder Law Attorney (CELA)***. You can find one of these in your area by going to the National Elder Law Foundation website:

www.nelf.org



Estate Planning

The simplest method of funding a trust for a child with a disability is typically with a term or whole life insurance policy.

Craig H. Wisnom, Esq. (February 20, 2012). Personal Communication. Tucson, AZ.



Estate Planning

“Those of us whose adult children have severe learning disabilities need to be able to answer the following questions:

- Do you know the difference between a will and trust?**
- Have you written a Letter of Intent?**
- What is a Special Needs Trust?” (p. 214).**

Ford, A. (2007). On Their Own: Creating an Independent Future for Your Adult Child with Learning Disabilities and ADHD. New York, NY: New Market.

Estate Planning

“A will is a disbursement of your assets after you are gone...After you die, your estate is divided up according to your wishes, with your disabled son or daughter getting enough to live on (hopefully) for the remainder of their lives. Wills can be contested, which means another relative could block the disbursement of those assets until a court settles the matter.” (p. 215)

Ford, A. (2007). On Their Own: Creating an Independent Future for Your Adult Child with Learning Disabilities and ADHD. New York, NY: New Market.

Trusts



“The terminology can also be quite confusing. When most people are talking about a "Trust", they are talking about a "Revocable" "Living" Trust, a Trust you set up while you are alive, which you can change whenever you wish. There are other types of trusts, including trusts that can be set up under your Will after your death ("Testamentary Trusts") such as a trust for a child until a certain age. There are also "Irrevocable Trusts" which are set up for more specialized purposes such as estate tax planning or asset protection.”

Bogutz and Gordon (2008). Do I Need a Revocable Trust? Tucson, Arizona:
www.bogutzandgordon.com/estateplanningfaqs.html#q7.

Special Needs Trust

- **This is a type of trust that is set for your disabled relatives after you die.**
- **It is typically irrevocable. This means it cannot be changed and it cannot be contested in court.**
- **The assets in the trust belong to the trust not to your disabled child.**

Ford, A. (2007). On Their Own: Creating an Independent Future for Your Adult Child with Learning Disabilities and ADHD. New York, NY: New Market.

Special Needs Trust

- **Even though you may believe your child may not need an SNT because you have sufficient financial resources and /or you child may not be “that impaired” you may need to consider one. “In short there are certain government programs and services that cannot be purchased privately; these programs require qualification for Medicaid.” (p. 1)**

Gallant, K.B., Iannantuoni, R.A., Pitney, D., Fetrow, K., and Gupta, S.S. (October, 2011). Understanding and Administering The Special Needs Trust. Heckscher, Teillon, Terrill & Sager, P.C.

Special Needs Trusts

“Such trusts are called many names, including spendthrift trusts, special needs trusts, discretionary trusts, special person trusts, etc. The key factor is not the actual name of the trust, but the specific terms of the trust.” (p. 1)

Bogutz & Gordon (2003-2010). Third Party Special Needs Trusts (Supplemental Benefits Trusts). Tucson, AZ: WWW.BOGURTZANDGORDON.COM.

Special Needs Trusts

- **“When a SBT (Special Benefits Trust, sic.) is set up for a disabled, handicapped, or mentally ill person by someone else, it is called a *Third Party Trust*. Typically the trust is created and the money comes from parents or other family members. The SBT can be created in a Will, in the parents’ own Revocable Living Trust, or even a stand-alone document. Money can be put into a SBT by a third party, but cannot be put into the trust by the disabled individual or his/her spouse...”**

Bogutz & Gordon (2003-2010). Third Party Special Needs Trusts (Supplemental Benefits Trusts). Tucson, AZ: WWW.BOGURTZANDGORDON.COM.

Special Needs Trusts

- **“...if the money already belongs to the disabled individual...that money would have to be put into a First Party Special Needs Trust that must have significantly different and less advantageous features than a Third Party Special Needs Trust.” (pp. 1-2).**

Bogutz & Gordon (2003-2010). Third Party Special Needs Trusts (Supplemental Benefits Trusts). Tucson, AZ: WWW.BOGURTZANDGORDON.COM.

First Party Special Needs Trust

- **“Once the money is placed in the trust, the beneficiary cannot withdraw it , or direct how the trustee will spend it. The trustee must have full legal control over the money, and although the trustee may consider requests made by or on behalf of the beneficiary, the trustee is free to say “no” to any request.” (p. 3)**

Bogutz and Gordon (2003-2010). First Party Special Needs Trusts: A primer for Injured Individuals or Disabled Persons and Their Families (SSI Recipients). Tucson, Arizona: WWW.BOGUTZANDGORDON.COM.

First Party Special Needs Trust

- **“When the disabled beneficiary dies, any money remaining in the trust must be paid back to the state Medicaid Agency for any services provided during the beneficiary’s lifetime. Only after the State has been paid back can the remaining funds (if any) can pass on to the disabled person’s family.” (p. 3)**

Bogutz and Gordon (2003-2010). First Party Special Needs Trusts: A primer for Injured Individuals or Disabled Persons and Their Families (SSI Recipients). Tucson, Arizona: WWW.BOGUTZANDGORDON.COM.

Third Party Special Needs Trust

“When a SBT (Special Benefits Trust/Special Needs Trust, sic.) is set up for a disabled, handicapped, or mentally ill person by someone else, it is called a Third Party Trust. Typically the trust is created and the money comes from parents or other family members. The SBT can be created in a Will, in the parents’ own Revocable Living Trust, or even as a stand-alone document. Money can be put into the SBT by any third party, but cannot be put into the trust by the disabled individual or his/her spouse.”
(p 1 of 5)

Bogutz & Gordon (2003-2010). Third Party Special Needs Trusts (Supplemental Benefits Trusts). Tucson, AZ: WWW.BOGURTZANDGORDON.COM.

Estate Planning

To be able to receive Social Security Supplemental Income, Medicare and Medicaid the child (or, adult child) cannot have:

- **Countable (stocks, bonds, checking accounts, etc.) assets of no more than \$2000.00**
- **Income more than \$2022.00 per month (2010)**

Bogutz and Gordon (2003-2010). First Party Special Needs Trusts (ALTCS Recipients).

Tucson, Arizona: WWW.BOGUTZANDGORDON.COM.

Estate Planning

- **“Non-countable assets consists primarily of a home of unlimited value, one vehicle per household if used for transportation, household belongings and furniture, clothing, personal jewelry, and pre-paid burial accounts.” (p. 3)**

Bogutz & Gordon (2003-2010). Third Party Special Needs Trusts (Supplemental Benefits Trusts). Tucson, AZ: WWW.BOGURTZANDGORDON.COM.

Special Needs Trust

- **If your child needs funds they request them from the trustees of the trust for your child's benefit.**
- **The trustees will distribute funds to help your child maintain their standard of living, but will protect them from being taken advantage of, etc. per your instructions.**

Ford, A. (2007). On Their Own: Creating an Independent Future for Your Adult Child with Learning Disabilities and ADHD. New York, NY: New Market.

Special Needs Trust

- **How to set up a special needs trust:**
 - Most major brokerage firms have Special Needs financial advisors.
 - Most major law firms have elder law attorneys who can help you create a special needs trust.
 - Certified Elder Law Attorney (CELA):
www.nelf.org
- Ford, A. (2007). On Their Own: Creating an Independent Future for Your Adult Child with Learning Disabilities and ADHD. New York, NY: New Market.

Special Needs Trust

- **Some elder law attorneys recommend disowning your disabled child in your will in order to assure they will not inadvertently inherit more than \$2000.00 worth of assets upon your death.**
- **It is a good idea to review your Special Needs Trust, estate plans, etc. every 2 to 3 years as laws change.**

Ford, A. (2007). On Their Own: Creating an Independent Future for Your Adult Child with Learning Disabilities and ADHD. New York, NY: New Market.

Special Needs Trust

- **It is best to have people/institutions that are not related to your family as the trustee(s) of the special needs trust.**
- **A bank trust department may be best.**
- **You should stipulate how successor trustees can be appointed in the document.**

Ford, A. (2007). On Their Own: Creating an Independent Future for Your Adult Child with Learning Disabilities and ADHD. New York, NY: New Market.

Letter of Intent

This is a letter that describes your disabled child in intimate detail which you add to and revise from time to time. It put a human face on your child for the trustees, attorneys, banks, etc. You describes you child's interests, likes and dislikes, hobbies, medical issues, disabilities, etc.

Ford, A. (2007). On Their Own: Creating an Independent Future for Your Adult Child with Learning Disabilities and ADHD. New York, NY: New Market.

In Conclusion

- **You should let your child know they will not be abandoned when you die.**
- **There will be someone who will care for them after you are gone.**
- **You have taken great care creating the above documents because you love them.**
- **And you will always love them.**

Ford, A. (2007). On Their Own: Creating an Independent Future for Your Adult Child with Learning Disabilities and ADHD. New York, NY: New Market.

Special Thanks!

- **Craig H. Wisnom, Esq., CELA**
Bogutz and Gordon, P.C.
Tucson, AZ



THE LAWS



National Disability Rights Network

National Disability Rights Network

900 Second Street, NE, Suite 211

Washington, DC 2002

P: 202-408-9514

F: 202-408-9520

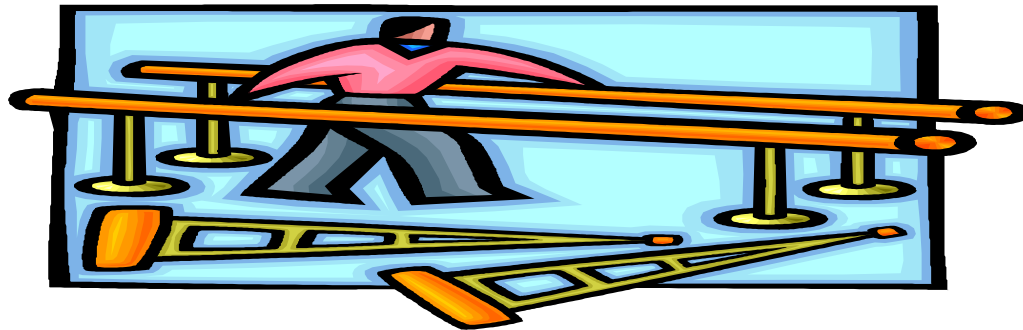
TTY: 202-408-9521

Website: www.ndrm.org



Section 504

- **Section 504 of the Rehabilitation Act of 1973:**
 - <http://www2.ed.gov/policy/speced/reg/narrative.html>
 - <http://www.dol.gov/oasam/regs/statutes/sec504.htm>



IDEA-2004

- **Individuals with Disabilities Education Act of 2004 (IDEA-2004):**

<http://idea.ed.gov/explore/view/p/%2Croot%2Cregs%2C>

- **The Individuals with Disabilities Education Act: Provisions Related to Children With Disabilities Enrolled by Their Parents in Private Schools:**

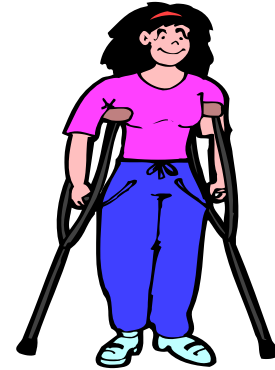
http://www2.ed.gov/admins/lead/speced/private_schools/index.html

School-To-Work Opportunities Act Of 1994

- All students are to have an official transition plan to transition to the world of work/post-secondary education.

[www.dol.gov/elaws/esa/flsa/scope/ee15astw.
asp](http://www.dol.gov/elaws/esa/flsa/scope/ee15astw.asp)

What is a “Disability?”



- **With adults the term disability has become a legal term of art since the passage of the American’s with Disability Act (ADA).**
- **One must be impaired compared to the Average American.**
- **Highly Controversial**

Gordon, M. and Keiser, S. (Eds.) (1998). Accommodations in Higher Education Under the Americans with Disabilities Act: A No-Nonsense Guide for Clinicians, Educators, Administrators, and Lawyers. New York, NY: Guilford.

Americans with Disabilities Act, Amendment Act of 2008

The new act makes it easier for a person to establish they have a disability. It directed the U.S. Equal Opportunity Employment Commission to redefine the term “substantially limits.” The list of “major life activities” was expanded to include reading, bending, walking, communicating, etc. The bill included bodily functions like difficulties with the immune system, bowel functions, etc. People with “episodic disabilities” are now better protected.

Equal Opportunity Employment Commission:

www.eeoc.gov/laws/statutes/adaaa_notice.cfm.



Americans with Disabilities Act, Amendments Act of 2008

- **Congress made it easier for a person to seek protection under the ADA if they have a disability because the term disability is now interpreted more broadly.**
- **The term “substantially limits” now requires a lower degree of functional limitations than has been applied in the courts.**
- **“Substantially limits” is now to be considered more broadly.**

Americans with Disabilities Act, Amendments Act of 2008

- **One still needs an “individualized assessment” to determine an impairment in a major life activity.**
- **“Mitigating measures” like medication for ADHD no longer can be used to determine level of impairment (glasses and contacts excluded).**
- **An impairment that is episodic or in remission is still considered a disability.**
- **Determination of disability should not require extensive analysis.**

Americans with Disabilities Act, Amendments Act of 2008

- Reading, standing, communicating, bowel movements, autoimmune functions, etc. are now considered “major life activities.”

From:

**Fact Sheet on the EEOC’s Final Regulations
Implementing the ADA AAA:**

www1.eeoc.gov//laws/regulations/adaaaa_fact_sheet.cfm?renderforprint=1

Protecting Students with Disabilities

- Department of Health and Human Services, Office of Civil Rights (OCR):
- Flyer: Protecting Students with Disabilities;
<http://www2.ed.gov/about/offices/list/ocr/504faq.html>
- Office of Civil Rights:
<http://www.hhs.gov/ocr/>



Social Interaction



How to Motivate ASD students to Learn Social Skills

- **After years of social rejection many ASD students want to be accepted for who they are and do not want to change to meet others expectations.**
- **One way of hooking them into learning social skills is to “invite” them to teach social skills to others.**

Baker, J. (2005). Preparing for Life: The Complete Guide for Transitioning to Adulthood for those with Autism and Asperger’s Syndrome. Arlington, TX: Future Horizons.

How to Motivate ASD students to Learn Social Skills

A good philosophy to adopt with ASD students about teaching them social skills is to say you are teaching them optional behaviors that may add to their ability to meet their goals. Acquiring these new skills will not threaten their uniqueness.

Baker, J. (2005). Preparing for Life: The Complete Guide for Transitioning to Adulthood for those with Autism and Asperger's Syndrome. Arlington, TX: Future Horizons.

Denial: The Longest River in Egypt

Baker Recommends the following to get past “the Nile”:

- Link needed training/service to their goals
- Make the process fun
- Use a reward system
- Work on strengths before weaknesses
- Get examples of successful ASD adults (Dr. Grandin)
- Encourage them to teach younger ASD students

Baker, J. (2005). Preparing for Life: The Complete Guide for Transitioning to Adulthood for those with Autism and Asperger’s Syndrome. Arlington, TX: Future Horizons.

What is Social Competence?

“Social competence is an ability to take another’s perspective concerning a situation and to learn from past experience and apply that learning to the ever-changing social landscape. The ability to respond flexibly and appropriately defines a person’s ability to handle the social changes that are presented to us all.” (p. 1-2)

Semrud-Clikeman, M. (2007). Social Competence in Children. New York, NY: Springer, pp. 1-2.

Social Competence and Health

“There is sufficient empirical evidence that links social competence to mental and physical health...It has been linked to such varied disorders as anxiety, cardiovascular disease, juvenile delinquency, and substance abuse, to name a few.” (p. 1)

Semrud-Clikeman, M. (2007). Social Competence in Children. New York, NY: Springer.



Ways Social Interactions Influence Physical Health

- **Social Support: Stress Buffering-Reduces the stressful event by promoting less threatening interpretation of the event.**
- **Social Integration: Main Effect-Promotes positive psychological states, social motivation and pressure to care for oneself.**
- **Negative Interactions: Relationships as a Source of Stress-Elicits psychological stress and increases risk for disease.**

Cohen, S. (November, 2004). Social Relationships and Health. American Psychologist, 59 (8), pp. 676-674.

Skills of Social Emotional Competence



- **Awareness of one's own emotional state**
- **Awareness of other's emotional state**
- **Emotional use of words**
- **Ability to cope with emotional distress**
- **Ability to attend to the reaction of others**

Semrud-Clikeman, M. (Spring, 2003). Executive Function and Social Communication Disorders. Perspectives, 29 (2), p. 20-22.

Semrud-Clikeman, M. (2007). Social Competence in Children. New York, NY: Springer.

25% of Americans Socially Isolated

- ✓ From 1985 to 2005 the typical American said the average number of people they could rely upon to help them with a significant concern dropped from 3 to 2.
- ✓ In 2005 twenty-five percent reported they had no trusted friend they could rely upon which is double the rate of 1985.

McPherson, M., Smith-Lovin, L. and Brashears, M.E. (2006). Social Isolation in America: Changes in Core Discussion Networks Over Two Decades. American Sociological Review, 71 , 353-375.

Isolation and The Immune System

- ✓ **Lonely people have more active genes that promote inflammation and less active genes that inhibit inflammation.**
 - ✓ **This puts them at risk for some cancers, degenerative neurological disorders and cardiovascular problems.**
- ✓ **Lonely people's immune systems are geared toward fighting bacteria not viruses.**
- ✓ **Sociable people have immune systems geared toward viruses.**

Isolation and The Immune System

Azar, B. (May, 2011). The Psychology of Cells. Monitor On Psychology, 42 (5), 32-35.

Miller, G., Chen, E. and Cole, S. (January, 2009). Health Psychology: Developing Biologically Plausible Models Linking the Social World and Physical Health. Annual Review of Psychology, 60, 501-524.

Cole, S.W., Hawkley, L.C., Arevalo, J.M., Sung, C.Y., Rose, R.M. and Cacioppo, J.T. (2007). Social Regulation of Gene Expression in Human Leukocytes. Genome Biology, 8 (9), doi:10.1186/gb-2007-8-9-r189.

Cole, S.W., Hawkley, L.C., Arevalo, J.M.G. and Cacioppo, J.T. (February 15, 2011). Transcript Origin Analysis Identifies Antigen-Presenting Cells as Primary Targets of Socially Regulated Gene Expression In Leukocytes. Proceedings of the National Academy of Sciences of the United States of America (PNAS), 108 (7), 3080-3085.

Ostracism and the Brain

- “No matter how and why people are left out their response is swift and powerful, inducing a social agony that the brain registers as physical pain.” (p. 32)
- “All social animals use this form of group rejection to get rid of burdensome group members. In nonhuman animals, an unaccepted member usually ends up dead.

Williams, K.D. (January/February, 2011). The Pain of Exclusion. Scientific American Mind, 21 (6), 30-37.

Ostracism and the Brain

- All people, no matter what their psychological makeup feel the pain of rejection equally.
- Within minutes ostracized people experience significantly lower self-esteem, a lack of meaning in their life, a lack of control, sadness and anger.
- People can feel rejected even by people they do not know, or even by those they hate.
- Being rejected can lead to physical and psychological illness.

Williams, K.D. (January/February, 2011). The Pain of Exclusion. Scientific American Mind, 21 (6), 30-37.

Ostracism and the Brain

- **“Even in a verbal or physical altercation, individuals are still connected. Total exclusion, however, severs all bonds. Social rejection also deals a uniquely harsh blow to self-esteem, because it implies wrongdoing.” (p. 34)**
- **“After all, social exclusion interferes not only with reproductive success, but also with survival.” (p. 34)**

Williams, K.D. (January/February, 2011). The Pain of Exclusion. Scientific American Mind, 21 (6), 30-37.

Ostracism and the Brain

- **In an fMRI study,...”As soon as students began to feel ostracized, the scanners registered a flurry of activity in the dorsal anterior cingulate cortex – a brain region associated with the emotional aspects of physical pain.”
(p. 34)**
- **Also the insula activates and judges the severity of the pain.**

Williams, K.D. (January/February, 2011). The Pain of Exclusion. Scientific American Mind, 21 (6), 30-37.

Ostracism and the Brain

- “...social rejection and physical injury are not much different experiences and share underlying neural pathways.” (p. 35)
- MRI studies have shown that painkillers can reduce the pain of social rejection.
- To reduce the pain of social rejection people will agree, mimic, obey, or cooperate with the rejecting group. Even if it goes against their beliefs and/or judgment.

Williams, K.D. (January/February, 2011). The Pain of Exclusion. Scientific American Mind, 21 (6), 30-37.

Ostracism and the Brain

- **Depressed and/or socially anxious people take longer to recover from ostracism than others.**
- **“In extreme cases, ostracized humans may resort to aggressive or violent acts when they have lost hope of being included in any socially acceptable group.” (p. 36)**

Williams, K.D. (January/February, 2011). The Pain of Exclusion. Scientific American Mind, 21 (6), 30-37.

Ostracism and the Brain



- **What to do if you are ostracized:**
 - 1. Remove yourself from the situation and distract yourself.**
 - 2. Remind yourself of your strengths.**
 - 3. Exercise more control in your life; assert yourself.**
 - 4. Reconnect with family and friends.**

Williams, K.D. (January/February, 2011). The Pain of Exclusion. Scientific American Mind, 21 (6), 30-37.

Autism Spectrum Disorders



- **“The Core Problem with autism is their social disability.”
(Klin, 2001)**

Klin, A. (2001). Autism, Asperger’s and the PDD Spectrum. Seminar presented at the 33rd Annual Arizona Association of School Psychologists Conference, “Across the Spectrum”, October 11 and 12, 2001, Mesa, AZ.

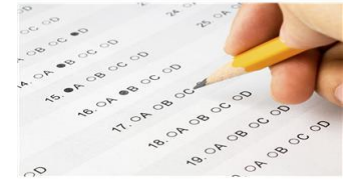
Autism Spectrum Disorders



- **Klin and Volkmar said of adults with Asperger’s Disorder, “Unless issues of social presentation and competence are adequately addressed, including what to do in specific situations such as lunch or free-time periods, the chances of vocational satisfaction are lessened.” (p. 351)**

Klin, A. and Volkmar, F.R. (2000). Treatment and Intervention Guidelines for Individuals with Asperger Syndrome. In A. Klin, F. Volkmar and S.S. Sparrow (Eds.), Asperger Syndrome. New York, NY: Guilford, pp. 340-366.

Simon Baron-Cohen and Emotional Intelligence



- Autism may be an extreme form of the biological male personality.
- Males are into *Systematizing (S)*, or understanding things.
- Females are into *Empathizing (E)*, or understanding people.
- Those with Autism (mostly males) have no *Empathizing*, but are strong in *Systematizing*.
- The *E-S Spectrum*

Baron-Cohen, S. (2003). The Essential Difference. New York, NY: Perseus.

Williams Syndrome



“Williams Syndrome is a genetic condition that is present at birth and can affect anyone. It is characterized by medical problems, including cardiovascular disease, developmental delays and learning disabilities. These occur side by side with striking verbal abilities, highly social personalities and an affinity for music... Individuals with Williams Syndrome have a very endearing personality. They have a unique strength in their expressive language skills and are extremely polite. They are typically unafraid of strangers and show a greater interest in contact with adults than with their peers.”

Author (No Date). What Is Williams Syndrome? From Williams Syndrome Association website: <http://www.williams-syndrome.org/what-is-williams-syndrome>.

Williams Syndrome



Williams Syndrome is a rare condition caused by missing genes. Parents may not have any family history of the condition. However, a person with Williams syndrome has a 50% chance of passing the disorder on to each of his or her children. The cause usually occurs randomly.

Williams Syndrome occurs in about 1 in 8,000 births.

One of the 25 missing genes is the gene that produces elastin, a protein that allows blood vessels and other tissues in the body to stretch. It is likely that having only one copy of this gene results in the narrowing of blood vessels seen in this condition.

A.D.A.M. Medical Encyclopedia (November 14, 2011). Williams Syndrome (Williams-Beuren Syndrome). Bethesda, MD: National Center for Biotechnology Information, U.S. National Library of Medicine. From website: <http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0002105/>.

Williams Syndrome



Those with Williams Syndrome have brains that are 20% smaller, particularly in the back of the brain which includes the occipital and parietal lobes. The temporal lobes are either normal in size or larger than normal. Their planum temporale is larger than normal and hence they often have perfect pitch. Finally, they use their cerebellum, brain stem and amygdala to process music thus it provides them an uniquely emotional experience when they hear it.

Sacks, O. (2007). Musicophilia:Tales of Music and the Brain. New York, NY: Alfred A Knopf.

ASD and Williams Syndrome

ASD and Williams Syndrome, “two sides of the same coin,” Allan Reiss Stanford Medical School professor said. Social behavior and communication are underdeveloped in ASD and overdeveloped in Williams Syndrome.

Inman, E. (May 20, 2010). New Findings About Williams Syndrome May Shed Light On Autism Research. The Stanford Daily. From website: <http://www.stanforddaily.com/2010/05/20/new-findings-about-williams-syndrome-may-shine-light-on-autism-research/>.

Asperger's and Gender



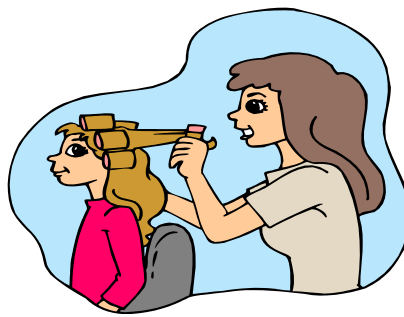
- **Girls and women with Asperger's Disorder suffer more socially than boys and men with Asperger's Disorder.**

Attwood, T. (2007). The Complete Guide for Asperger's Disorder. Philadelphia, PA: Jessica Kingsley.

Hully, C. and Larmar, S.A. (2006). Asperger Syndrome in Adolescent Females. International Journal of Learning. **13** (3), p. 1-6. From Website:

<http://www98.griffith.edu.au/dspace/bitstream/10072/14167/1/40458.pdf>.

Compassion



- **Three things make humans behaviorally different from all other species:**
 - **Our capacity to delay our response to our environment (Bronowski, 1977).**
 - **Our capacity for compassion (Leakey, 1995).**
 - **Our capacity for long-term compassion (Grandin, 1995).**

Bronowski, J. (1977). Human and Animal Languages: In a Sense of Future. Cambridge, MA: MIT Press. pp. 104-131.

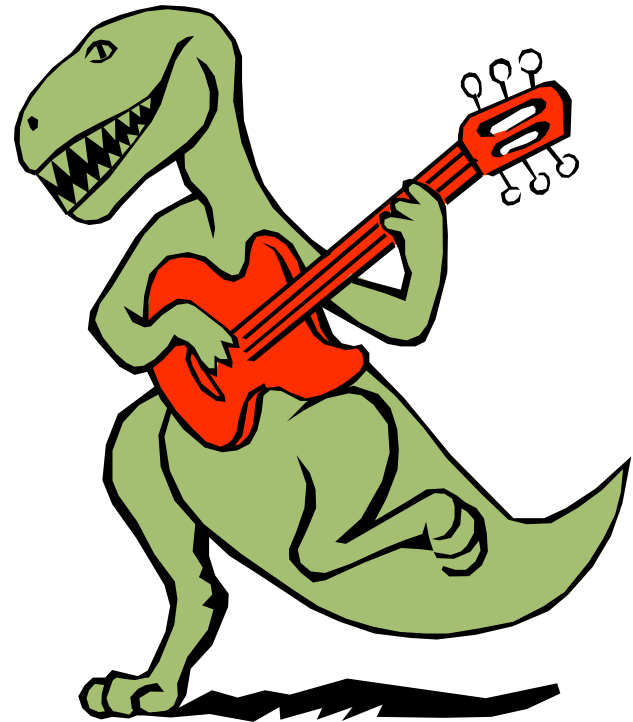
Leakey, R. (1995). Speech given to the National Press Club, Washington, DC, Played on National Public Radio.

Grandin, T. (1995). Thinking In Pictures: And Other Reports From My Life With Autism. New York, NY: Vintage.

Kinder, Gentler, T-Rex

- **There is now evidence that some dinosaurs nested and raised offspring similar to modern birds. Hence, they had some capacity for compassion.**

Horner, J. (2000). Dinosaur Reproduction and Parenting. Annual Review of Earth and Planetary Sciences, 28, p. 19-45.



Compassion



“The findings command attention, as the bonobo is just as close to us as its sibling species, the chimpanzee. According to DNA analysis, we share over 98 percent of our genetic with each of these two apes...the genetic makeup of a chimpanzee or bonobo matches ours more closely than any other animal...In terms of family resemblance, only two options exist: either we are one of them or they one of us.” (p. 5)

DeWaal, F., and Lanting, F. (1997). Bonobo: The Forgotten Ape. Berkley, CA: University of California Press, p. 5.

Compassion

“In the summer of 1982 Kat was newly pregnant, and Washoe doted over her belly, asking about her BABY. Unfortunately, Kat suffered a miscarriage. Knowing that Washoe had lost two of her own children, Kat decided to tell her the truth. MY BABY DIED, Kat signed to her. Washoe looked down to the ground. Then she looked into Kat’s eyes and signed CRY, touching her cheek just below the eye. When Kat had to leave that day, Washoe would not let her go. PLEASE PERSON HUG, she signed.” (Fouts, 1997; Edwards, 2000)

Fouts, R. (1997). Next of Kin: My Conversations with Chimpanzees.

New York, NY: William Morrow.

Edwards, M. (Spring, 2000). Book Review. The Harvard Brain. From website:

hcs.harvard.edu/~husn/BRAIN/vol7-spring2000/fouts.htm.



Compassion



- **Bonobo: Pan paniscus**
 - Shares 98% of its genetic profile with humans.
 - They have been compared to australopithecines
 - “In physique, a bonobo is as different from a chimpanzee as a Concorde is from a Boeing 747.”
(p. 3 of 14)

DeWaal, F.B.M. (March 1995). Bonobo Sex and Society. Scientific American. pp. 82-88.
From Website: <http://primates.combonobos/bonobosexsoc.html>.

Bonobo: Pan Paniscus



Compassion



- **The dominate male bonobo at the Great Ape Trust in Iowa, Kanzi, can communicate by using 348 symbols and knows the meaning of up to 3000 words!**

Raffaele, P. (November, 2006). The Smart and Swinging Bonobo. Scientific American. 37 (6), pp. 66-75.

Bonobos & Vasopressin



“Interestingly, this same polymorphic microsatellite in the human *AVPR1A* that has been associated in autism is absent in the common chimpanzee, but present in the bonobo. Bonobos are known for high levels of psychosexual reciprocity and they appear to use sexuality to promote social reconciliation as well as social bonding within the group. Therefore, it is intriguing to consider that as in voles, variations in unstable microsatellite sequences in the promoters of the primate vasopressin receptor may contribute to species difference in expression and social behaviour, as well as to individual differences in social behaviour.” (p. 2195)

Hammock, E.A.D. and Young, L.J. (December, 2006). Oxytocin, Vasopressin and Pair Bonding: Implications for Autism. Philosophical Transactions of the Royal Society of Biological Sciences, 361 (1476), pp. 2187-2198. From Website: <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1764849>.

Chimpanzee, Bonobos, Humans & Vasopressin



**“Similar genetic variation in the human *AVPR1A* may contribute to variations in human social behavior including extremes outside the normal range of behavior and those found in autism spectrum disorders.”
(p. 2187)**

Hammock, E.A.D. and Young, L.J. (December, 2006). Oxytocin, Vasopressin and Pair Bonding: Implications for Autism. Philosophical Transactions of the Royal Society of Biological Sciences, 361 (1476), pp. 2187-2198. From Website:
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1764849>

Chimpanzee, Bonobos, Humans & Vasopressin



“Our two closest primate cousins – chimpanzees and bonobos –also have different lengths of this gene, which match their social behaviors. Chimpanzees, who have the shorter gene, live in territorially based societies controlled by males who make frequent, fatal war raids on neighboring troops. Bonobos are run by female hierarchies and seal every interaction with a bit of sexual rubbing...”

Chimpanzee, Bonobos, Humans & Vasopressin



“...they are exceptionally social and have a long version of the gene. The human version of the gene is more like the bonobo gene. It would seem that those with the longer version of the gene are more socially responsive. For example, this gene is shorter in humans with autism...” (p. 74)

Brizendine, L. (2006). The Female Brain. New York, NY: Morgan Road.

Teco, The Autistic Bonobo Toddler

- **Recently the researchers at the Great Ape Trust in Iowa report that an 18 month old male bonobo toddler shows significant signs of autistic behavior.**
- **Additionally recent research has demonstrated that the bonobo social brain is much more similar to that of humans than to chimpanzees.**

Teco, The Autistic Bonobo Toddler

“When Teco was 2 months old, Elikya handed the baby off to his aunt, as if asking for help. The aunt, Panbanisha, brought him to institute staff, who took on more of the responsibility for rearing Teco.

That's when they began to notice that he also showed various autism-like symptoms: lack of eye contact, strict adherence to rituals or routines, repetitive behaviors, and an interest in objects rather than in social contact...”

Teco, The Bonobo Toddler

“...A blanket, for example, has to be arranged just so or else Teco becomes agitated, says scientific director William Fields. Teco also shows repetitive movements similar to those seen in some children with autism.”

- **"He seemed to be fascinated by parts of objects, like wheels and other things and he wasn't developing joint attention," Fields adds. "The baby was avoiding eye contact — it was like it was painful for him."**

Deweert, S. (April 15, 2011). An Ape With Autism. New York, NY: Simons Foundation, Autism Research Initiative (SFARI). From website: <https://sfari.org/about-sfari/contact-us> .

ASD Fruit Fly?



Scientists at the University of Arizona have discovered a mutant fruit fly which constantly flies in circles and grooms itself. Other identical flies have been bred. In some ways it is genetically similar to those with ASD. They are trying to develop a medication that will change its behavior. In the future they hope to do the same with rats.

Huonker, M. (April 10, 2012). University of Arizona Neuroscience professor and team are doing research with fruit flies to find drug for autism. Tucson, AZ: Arizona Public Media. YouTube video:

http://www.youtube.com/watch?v=42PVK7TnhVg&list=PL212BA630A5E8E1B4&index=9&feature=plpp_video.

Alexithymia



What is Alexithymia?



1. **Tends not to have fantasies, no feelings and have sharply limited emotional vocabularies.**
2. **They have colorless dreams.**
3. **They cannot tell bodily sensations from emotions and are baffled by them.**
4. **They have great difficulty making decisions because they lack “gut feelings.”**

Goleman, D. (1995). Emotional Intelligence: Why It Can Matter More Than I.Q. New York, NY: Bantam.

Alexithymia

- **“Functional imaging studies implicate medial and prefrontal cortex and posterior superior sulcus (STS)... The STS is concerned with representing the actions of others through the detection of biological motion; medial prefrontal regions are concerned with explicit representation of the states of the self. These observations suggest that the ability to mentalize has evolved from a system for representing actions.”**

Frith, C.D. and Frith, U. (1999). Intersecting Minds-A Biological Basis. Science, 286, 1692-1695.

Alexithymia

Lane wrote, “Several neuroimaging studies reveal that an area of the medial prefrontal cortex very close to that identified in our attention to emotional experience study has been implicated during the performance of theory of mind tasks...these findings suggest that the neural substrates of the mental representation of one’s own and other’s mental states are closely related.” (p. 18) Lane continued that several studies of brain injured individuals when coupled with the above appeared to indicate, “...*that successful social adaptation requires the ‘dual task’ ability to stay in touch with the needs of others while paying due attention to one’s own needs.*” (p. 20)

Lane, R. (2000). Neural Correlates of Conscious Emotional Experience. In L.R. Lane, et. al. (Eds.), Cognitive Neuroscience of Emotion. New York, NY: Oxford University Press, pp. 345-370.

Macaque Monkey



Macaques “Mirror Neurons”

Researchers discovered “mirror neurons” at the University of Parma in Italy in 1992.

Rizzolatti, G., Fogassi, L. and Gallese, V. (November, 2006). Mirrors in The Mind.

Scientific American, 296 (5), pp. 54-61.

Mirror Neurons



- Italian study of macaque monkeys in 1992
 - Known for years cells of premotor cortex fire just before movement.
 - Discovered the same cells fired in the same pattern when another primate was seen making the same movement!
 - Humans have these MIRROR NEURONS too.
 - They allow us to intuit others intentions and to feel their pain.

Lametti, D. (June 9, 2009). Mirroring Behavior. Scientific American, from website: www.scientificamerican.com/article.cfm?id=mirroring-behavior.

Mirror Neurons



“Much as circuits of neurons are believed to store specific memories within the brain, sets of mirror neurons appear to encode specific sets of actions. This property may allow an individual not only to perform basic motor procedures without thinking about them but also to comprehend those acts when they are observed, without any need for explicit reasoning about them.” (p. 56)

Rizzolatti, G., Fogassi, L. and Gallese, V. (November, 2006). Mirrors in The Mind. Scientific American, 296 (5), pp. 54-61.

Mirror Neurons



- **“With knowledge of these neurons, you have the basis for understanding a host of enigmatic aspects of the human mind: ‘mind reading’ empathy, imitation learning, and even the evolution of language. Anytime you watch someone else doing something (or even starting to do something), the corresponding mirror neuron might fire in your brain, thereby allowing you to ‘read’ and understand another’s intentions, and thus develop a sophisticated *theory of other minds*.” (p.2)**

Ramachandran, V.S. (3/8/05). Mirror Neurons and Imitation Learning as the Driving Force Behind “The Great Leap Forward” in Human Evolution.

www.edge.org/3rd_culture/ramachandran/ramachandran_p2.html

Mirror Neurons



- There are visual and audiovisual mirror neurons in the brain in several places.
- Areas involved in the brain:
 - Inferior Frontal Gyrus: guidance of movement/assessment of intentions
 - Anterior Cingulate Cortex: regulation of empathy
 - Angular Gyrus: semantic comprehension combining sensory input
 - Insula/Amygdala: pain & disgust

Rizzolatti, G., Fogassi, L. and Gallese, V. (November, 2006). Mirrors in The Mind. Scientific American, 296 (5), pp. 54-61.

Ramachandran, V.S. and Oberman, L.M. (November, 2006). Broken Mirrors. Scientific American, 296(5), pp. 62-69.

Mirror Neurons May Help Us Generate Appropriate Social Responses

“These results suggest that a set of mirror neurons encodes the observed motor acts not only for action understanding, but to analyze such acts in terms of features that are relevant to generating appropriate behaviors.”

Caggiano, V., Fogassi, L., Rizzolatti, G., Their, P., Casile, A. (April 2009). Mirror Neurons Differently Encode the Peripersonal and Extrapersonal Space of Monkeys. Science. 324 (5925), pp. 403-406; From website: www.sciencemag.org/cgi/content/abstract/324/5925/403.



Mirror Neurons & Executive Functions



“Studies show that the capacity to imitate the actions of others is now virtually an instinct at the level of neuronal functioning. The PFC (Prefrontal Cortex, sic) responds to viewing others’ actions by activating the same sensory-motor regions of the brain as the acting person is using to create the behavior. The mirror-neuronal system has been linked to theory of mind and to empathy, among other human attributes related to EF (Executive Functions, sic.)” (p. 117).

Barkley, R.A. (2012). Executive Functions: What They Are, How they Work, and Why They Evolved. New York, NY: Guilford.

Mirror Neurons and Autism

- **“Broken mirror neurons” MAY explain isolation and lack of empathy.**
- **Those with autism spectrum disorders lack activity in many areas associated with mirror neurons.**

Ramachandran, V.S. and Oberman, L.M. (November, 2006).
Broken Mirrors. Scientific American, 296(5), pp. 62-69.



Mirror Neurons



I spoke to Uta Frith about using the combination of her group's research on emotional working memory and the mirror neuron research as an explanation of autistic behavior. She said the combination of theories could not differentiate autistic behavior and antisocial behavior.

Frith, U. (November 1, 2007). Personal Communication. International Dyslexia Association 58th Annual Conference, Dallas, TX.

Mirror Neurons



However, Blair wrote after reviewing the literature, “It is suggested from this literature that empathy is not a unitary system but rather a loose collection of partially dissociable systems. In particular, three divisions can be made: cognitive empathy (or Theory of Mind), motor empathy, and emotional empathy. The two main psychiatric disorders associated...

Mirror Neurons



“...with empathic dysfunction are considered: autism and psychopathy. It is argued that individuals with autism show difficulties with cognitive and motor empathy but less clear difficulties with respect to emotional empathy. In contrast, individuals with psychopathy show clear difficulties with a specific form of emotional empathy but no indications of impairment with cognitive and motor empathy.” (p. 1 of 2)

Blair, R.J.R. (December, 2005). Responding to the Emotions of Others: Dissociating Forms of Empathy Through the Study of Typical and Psychiatric Populations. Consciousness and Cognition, 14 (4), pp. 698-718. From Website:
www.sciencedirect.com/science?_ob=ArticleURL&_B6WD0-4H39727-2&_user.

Zero Degrees of Positive Empathy Vs Zero Degrees of Negative Empathy

- What Blair wrote about empathy is essentially what Simon Baron-Cohen wrote regarding differentiating ASD and antisocial individuals in his book:

Baron-Cohen, S. (2011). The Science of Evil: On Empathy and The Origin of Cruelty. New York, NY: Basic Books.



Mirror Neurons



“Our results show that this ‘mirror system’ integrates observed actions of others with an individual’s personal motor repertoire and suggests the human brain understands actions by motor stimulation.” (p. 1243)

Glaser, D. (January 2005). Mirror Neurons: Research Update. NOVAscienceNOW. Public Broadcasting System (PBS). www.pbs.org/wgbh/nova/sciencenow/3204/01-resup.html, p. 1

Calvi-Merino, B., Glaser, D.E., Greeze, J., Passingham, R.E., and Haggard, P. (2005). Action Observation and Acquired Motor Skills: An fMRI Study with Expert Dancers. Cerebral Cortex, 15 (8), p. 1243-1249.

Alexithymia MAY BE A NEUROBIOLOGICAL DISORDER!

“We now have a psychological term, *alexithymia*, to describe another characteristic associated with Asperger’s syndrome, namely someone who has impaired ability to identify and describe feeling states.” (p. 130)

Attwood, T. (2007). The Complete Guide to Asperger’s Syndrome. Philadelphia, PA: Jessica Kingsley, p. 130.



“Symptoms” of Alexithymia

- **Difficulty identifying different types of feelings**
- **Difficulty distinguishing between emotional feelings and bodily feelings**
- **Limited understanding of what caused the feelings**
- **Difficulty verbalizing feelings**
- **Limited emotional content in the imagination**
- **Functional style of thinking**
- **Lack of enjoyment and pleasure-seeking**
- **Stiff, wooden posture**

Author (January 23, 2003). The Alexithymia FAQ. From web site:

www.anglefire.com/al4/alexithymia/

What About PTSD?



**“If mild stress becomes chronic, the unrelenting cascade of cortisol triggers genetic actions that begin to sever synaptic connections and cause dendrites to atrophy and cells to die; eventually, the hippocampus can end up physically shriveled, like a raisin.”
(p. 74)**

**Ratey, J.J. (2008). Spark: The Revolutionary New Science of Exercise and The Brain.
New York, NY: Little, Brown, p. 74.**

What About PTSD?



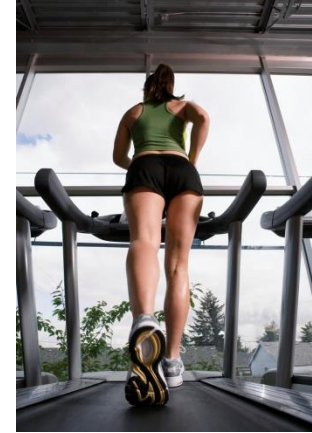
- **Hippocampus loses neuronal connections**
- **Medication and talk therapy can grow new neurons**

Prince, J. (October 28, 2006). Closing Keynote Address - Bridging the Gap: Putting a Face on AD/HD. Paper presented at the 18th Annual CHADD International Conference, Chicago, IL.

Durman, R.S. (2002). European Journal of Psychiatry, 17 (Supplement 3), 306-310.

Saploski, R.M. (2004). Why Zebras Don't Get Ulcers, Third Edition. New York, NY: Holt, p.221

What About PTSD?

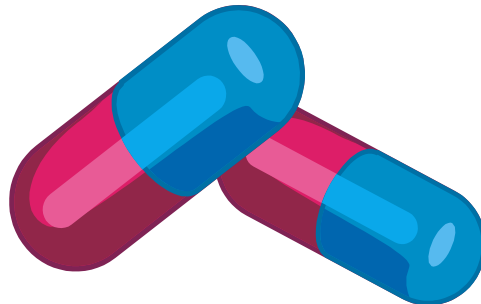


“At every level, from the microcellular to the psychological, exercise not only wards off the ill effects of chronic stress; it can also reverse them. Studies have shown that if researchers exercise rats that have been chronically stressed, that activity makes the hippocampus grow back to its preshriveled state.” (p. 79)

Ratey, J.J. (2008). Spark: The Revolutionary New Science of Exercise and The Brain. New York, NY: Little, Brown.

Possible Treatment for Emotional Working Memory Problems

- **Stimulant Medication?**
 - **Lessens Hyperactivity and Impulsivity in AD/HD, Combined Type Individuals**
 - **Hundreds of Double Blind Studies to Support**
- Barkley, R.A. (2006). Attention Deficit Hyperactivity Disorder, 3rd Edition. New York, NY: Guilford.



ASD & AD/HD

- **26% of Children with PDD-NOS, or ASD have comorbid Combined Type AD/HD**
- **33% of Children with PDD-NOS, or ASD have comorbid Inattentive AD/HD**
- **59% of Children with PDD-NOS, or ASD have some type of AD/HD**
- **DSM-5 will remove ASD from AD/HD exclusion criteria**

Goldstein, S., and Naglieri, J.A. (August, 2011). Neurocognitive and Behavioral Characteristics of Children with ADHD and Autism: New Data and Strategies. The ADHD Report, 19(4), 10-12,16.

Author (May 3, 2012). DSM-5 Development, Attention Deficit/Hyperactivity Disorder, Rationale. Washington, DC: American Psychiatric Association; From website: <http://www.dsm5.org/ProposedRevision/Pages/proposedrevision.aspx?rid=383#>.

Possible Alternative Medicine Treatment for Working Memory Problems (RESEARCH-17 to 33)



❖ Working Memory Training:

- Torkel Klingberg, M.D., Ph.D.
- Karolinska Institute- Stockholm, Sweden
- CogMed software company (RM Program)
- AD/HD deficient in visual spatial working memory (WM) that becomes worse with age.
- **MAY** help relieve visual spatial WM difficulties and reading comprehension in Combined Type AD/HD.
- ***More Research is needed!***
www.cogmed.com

Klingberg, T. (February, 2006). Training Working Memory. AD/HD Report, 14 (1), pp. 6-8.

Barkley, R. (February, 2006). Editorial Commentary Issues in Working Memory Training in ADHD. ADHD Report, 14 (1), pp. 9-11.

Ingersoll, B. (October 26, 2006). Complementary Treatments for AD/HD. Paper Presented at the 18th Annual CHADD International Conference, Chicago, IL.

Klingberg, T. and Anderson, M. (October 28, 2006). Computerized Training of Working Memory in Children with AD/HD. Paper presented at the 18th Annual CHADD International Conference, Chicago, IL.

Treating Mirror Neuron Difficulties



Oxytocin & Vasopressin In Autism

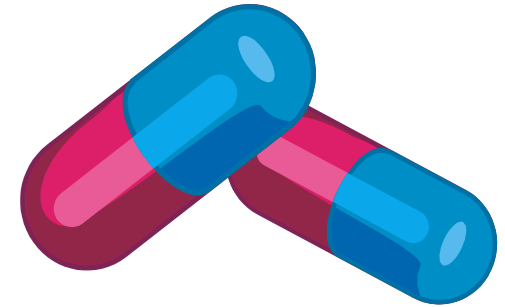


“Oxytocin and vasopressin contribute to a wide variety of social behaviors, including social recognition, communication, parental care, territorial aggression and social bonding.” (p. 2187)

Hammock, E.A.D. and Young, L.J. (December, 2006). Oxytocin, Vasopressin and Pair Bonding: Implications for Autism. Philosophical Transactions of the Royal Society of Biological Sciences, 361 (1476), pp. 2187-2198. From Website:
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1764849>

Some Treatments For Mirror Neuron Difficulties

- Risperidone and MDMA (ecstasy):
To raise oxytocin levels
- Biofeedback:
To help control anxiety
- Oxytocin Nasal Spray



.Author (1997). Use of “Atypical” Neuroleptics in the Treatment of PDDs. MedScape Psychiatry & Mental Health Journal, 2 (4): www.medscape.com/viewarticle/430897_5

Ramachandran, V.S. and Oberman, L.M. (November, 2006). Broken Mirrors. Scientific American, 296(5), pp. 62-69.

Guastella, A.J., Einfeld, S.L., Gray, K.M., Rinehart, N.J., Tonge, B.J., Lambert, T.J., and Hickie, I.B. (April 1, 2010). Internasal Oxytocin Improved Emotion Recognition for Youth with Autism Spectrum Disorders. Biological Psychology, 67 (7), 692-694; www.ncbi.nlm.nih.gov/pubmed/19897177.

MDMA & Oxytocin Nasal Spray ARE EXPERIMENTAL TREATMENTS!!!!

Theory of Mind & Mirror Neuron “Software”

- **“Able individuals with autism spectrum disorders can with time and practice achieve awareness of mental states by compensatory learning.” (p. 977)**

Frith, U. (2001). Mind Blindness and the Brain in Autism. Neuron, 32, 969-979.

- **Possible Treatment Technique -
Carol Gray – Social Stories &
Laurel Falvo- Social Response
Pyramid:**

www.thegraycenter.org/



Professionals Who Can Help With Alexithymia

- **Psychologists-American Psychological Association: www.apa.org**
- **Psychiatrists-American Psychiatric Association: www.apa@psych.org**
- **Social Workers-National Association of Social Workers: www.naswdc.org**
- **American Association of Marriage and Family Therapists: www.aamft.org**
- **Counselors-National Board of Certified Counselors: www.nbcc@nbcc.org**

Professionals Who Can Help With Alexithymia (Continued)

- Behavioral Neurology/Neuropsychiatry-
American Neuropsychiatric Association:
www.anpaonline.org
- Speech Language Pathologist-American
Speech-Language Hearing Association:
www.professional.asha.org

ASD and Shyness



Social Anxiety/ Shyness



- **Fight or Flight Response**

Benson, H. (1983). The Relaxation Response. New York, NY: Outlet Books.

Benson, H. (1994). Beyond The Relaxation Response. New York, NY: Berkley Books.

Fight or Flight Response Vs. Tend and Befriend Response



- ***Shelley Taylor,
Ph.D.***

**Taylor, S.E. (2002). The Tending Response.
New York, NY: Holt.**



Tend and Befriend



Taylor, S.E. (2002). The Tending Instinct: How Nurturing is Essential To Who We Are And How We Live . New York, NY: Holt.



“Savanna Anxiety”



**“In general, when dominance hierarchies are unstable, glucocorticoid levels rise. This makes sense, because such instabilities make for stressful times. Looking at individual baboons, however, shows a more subtle pattern: given the same degree of instability, males whose ranks are dropping have elevated glucocorticoid levels, while male whose ranks are rising amid the tumult don’t show this endocrine trait.”
(p. 263)**

Saploski, R.M. (2004). Why Zebras Don’t Get Ulcers, Third Edition. New York, NY: Holt.

“Savanna Anxiety”



“Thus after factoring out rank, lower basal glucocorticoid levels are found in males who are best at telling the difference between threatening and natural interactions; who take the initiative if the situation is clearly threatening; who are best at telling who won or lost; and, in the latter case who are most likely to make someone pay for the defeat.” (p. 314)

Saploski, R.M. (2004). Why Zebras Don't Get Ulcers, Third Edition. New York, NY: Holt.

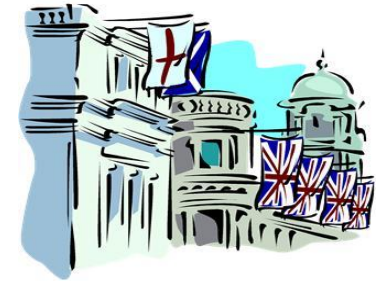
“Savanna Anxiety”



“Remarkably, this style is stable over the years of these individuals’ lives, and carries a big payoff – males with this cluster of low glucocorticoid traits remain high ranking significantly longer than average.” (p. 315)

Saploski, R.M. (2004). Why Zebras Don’t Get Ulcers, Third Edition. New York, NY: Holt.

The “Whitehall” Study



“The Whitehall study of British civil servants begun in 1967, showed a steep inverse association between social class, as assigned by grade of employment, and mortality from a wide variety of diseases.” (p. 1387) A second “Whitehall Study” was conducted from 1985 to 1988. “...and found an inverse relationship between employment grade and prevalence of angina, electrocardiogram evidence of ischemia and symptoms of chronic bronchitis. Self-perceived health status and symptoms were worse in subjects with lower status jobs. There were clear employment grade differences in health risk behaviors including...”

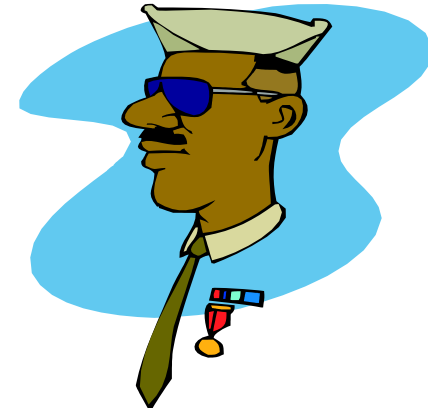
The “Whitehall” Study (Continued)

“...smoking, diet, and exercise, in economic circumstances, in possible effects of early-life environment as reflected by height, in social circumstances at work..., and social supports.” (p. 1387).



Marmot, M.G., Smith, G.D., Stanfeld, S., Patel, C., Head, J., White, I., Brunner, E., and Fenney, A. (1991). Health Inequalities Among British Civil Servants: Whitehall II Study. Lancet, 337 (8754), p. 1387-1393. From website: www.nicbi.nlm.gov/pubmed/1674771.

Social Anxiety and Shyness



- **Attwood (2002) gave an example of an Australian soldier who fought behind enemy lines as a lone sniper in Vietnam who said his social anxiety is much more pronounced than his PTSD from the war ever was.**

Atwood, T. (July, 2002). Social Skills for Children with Asperger's and High Functioning Autism. Workshop presented on July 19, 2002 in Scottsdale, AZ: Future Horizons, Inc. 721 West Abram Street, Arlington, TX 76013.

Social Anxiety



“Social anxiety can prevent you from accessing the social information you know to be true and the social skills you have intact...Unfortunately, social anxiety appears to be strongly correlated with having weaker social thinking and related social skills.” (p. 206)

Garcia Winner, M., and Crooke, P. (2011). Social Thinking At Work: Why Should I Care. San Jose, CA: Social Thinking.

Melting Down



“New research demonstrates that acute, uncontrollable stress sets off a series of chemical events that weaken the influence of the prefrontal cortex while strengthening the dominance of older parts of the brain. In essence, it transfers high-level control over thought and emotion from the prefrontal cortex to the hypothalamus and earlier evolved structures...”

Melting Down



“...As the older parts take over, we find ourselves either consumed by paralyzing anxiety or else subject to impulses that we usually manage to keep in check: indulgence in excess food, drink, drugs or a spending spree at a local specialty store. Quite simply, we loose it.” (p. 50)

Arnsten, A., Mazure, C.M., Sinha, R. (April, 2012). This is Your Brain in Meltdown. Scientific American, 306 (4), 48-53.

Melting Down



- **Some people are more at risk of melting down due to genetic factors or previous stress exposure.**
- **“Chronic stress appears to expand the intricate web of connections among neurons in our lower emotional centers, whereas the areas engaged during flexible, sustained reasoning... -- start to shrivel.” (p. 53)**

Arnsten, A., Mazure, C.M., Sinha, R. (April, 2012). This is Your Brain in Meltdown. Scientific American, 306 (4), 48-53.

Melting Down



- **With stress there is a shrinkage of the prefrontal gray matter while the amygdala enlarges.**

Arnsten, A., Mazure, C.M., Sinha, R. (April, 2012). This is Your Brain in Meltdown. Scientific American, 306 (4), 48-53.

- **Temple Grandin, Ph.D.'s amygdala is larger than normal.**
- **Her colitis left after she took an antidepressant for anxiety.**

Grandin, T. (May 4, 2012). Autism and My Sensory Based World. Paper presented at the Conference On Autism & Asperger's Syndrome, Grandin, T., Cutler, E. and Moyes, R. Presenters, Tucson, AZ. Future Horizons; Arlington, TX.

Generalized Anxiety Disorder and ASD

“We know that young children with Asperger’s syndrome are prone to develop mood disorders...and some children seem to be almost always anxious which might indicate Generalized Anxiety Disorder (GAD)...they may be in a constant state of alertness, leading to a risk of mental and physical exhaustion.” (p. 17)

Attwood, T. (2007). The Complete Guide to Asperger’s Syndrome. Philadelphia, PA: Jessica Kingsley.

Social Anxiety Disorder and ASD

- **People with ASD are at great risk of having Social Anxiety Disorder (SAD).**
- **Those with SAD and ASD need cognitive behavioral therapy (CBT) and often medication. They will also need social skills training and self-esteem restructuring.**

Attwood, T. (2007). The Complete Guide to Asperger's Syndrome. Philadelphia, PA: Jessica Kingsley.

Social Anxiety Disorder (SAD) & Unemployment

- **Patients with Major Depressive Disorder, or Anxiety Disorders have higher unemployment and work impairment than the norm.**
- **Patients with SAD are 2 ½ times more likely than those with Major Depressive Disorder, or other forms of Anxiety Disorders to be unemployed.**

Moitra, E., Beard, C., Weisberg, R.B., and Keller, M.B. (September, 2010). Occupational and Social Anxiety Disorder in a Sample of Primary Care Patients. Journal of Affective Disorders. doi: 10.1016/jad2010.09.024.

Social Anxiety Disorder (SAD) & Unemployment

- **“These findings highlight the particular need to assess the presence of under education and underperformance at work and/or unemployment in individuals with SAD, as they are at most risk for these impairments. Additionally, early detection and intervention with individuals with, or at risk for SAD may curb the impact of social anxiety or occupational attainment.”**

**Moitra, E., Beard, C., Weisberg, R.B., and Keller, M.B. (September, 2010).
Occupational and Social Anxiety Disorder in a Sample of Primary Care Patients.
Journal of Affective Disorders. doi: 10.1016/jad2010.09.024.**

Social Anxiety & Shyness



- **10 to 15% of newborns have an inherited enhanced startle response.**
- **A 20 year follow-up study of such children with fMRI imaging indicated they are still shy neurologically, especially to strangers.**

Zimbardo, P.G. (2000). The Personal and Social Dynamics of Shyness: Adults and Children. Paper presented at the 50th Annual Arizona Psychological Association Conference, October 21, 2000, Tucson, AZ.

Schwartz, C.E., Wright, C.I., Shin, L.M., Kagan, J., Rauch, S.L. (June, 2003). Inhibited and Uninhibited Infants “Grown Up”: Adult Amygdalar Response to Novelty. Science, 300 (5627), pp. 1952-1953.

Social Anxiety and Shyness



The amygdala is activated in the genetically shy when they are shown pictures of unfamiliar people. This would tend to indicate they feel fear and are overly vigilant when they see strangers. This does not occur in the non-shy.

Schwartz, C.E., Wright, C.I., Shin, L.M., Kagan, J., Rauch, S.L. (June, 2003). Inhibited and Uninhibited Infants “Grown Up”: Adult Amygdalar Response to Novelty. Science, 300 (5627), pp. 1952-1953.

Shyness Defined

- **“Shyness may be defined experimentally as discomfort or inhibition in interpersonal situations that interferes with pursuing one’s interpersonal or professional goals.” (p. 497)**

Henderson, L. and Zimbardo, P. (1998). Shyness. Encyclopedia of Mental Health, 3, p. 497.



Social Phobia



- **Two Subtypes:**
 - 1. Specific Type- public speaking, eating in public, etc.**
 - 2. Generalized Type-very broad**
 - **These people shy away from treatment: 36% of those who meet DSM criteria actually get treatment**

Dittmann, M. (July/August, 2005). Stemming Social Phobia. Monitor On Psychology, **36** (7), pp. 92-94.

Heimberg, R.G., Liebowitz, M.R., Hope, D.A., Scheier, F.R., Holt, C.S., Welkowitz, L.A., Juster, H.R., Campeas, R. Bruch, M.A., Cloutre, M, Fallon, B., Klein, D.F. (1998). Cognitive Behavior Group vs Phenelzine Therapy for Social Phobia. Archives of General Psychiatry, **55**, p. 1133-1141.

Shyness in a Nutshell

- **“S”ELF-BLAME AND SHAME**
- **“A”VOIDANCE**
- **“D”ISTRESS**
- **“F”EAR OF NEGATIVE EVALUATION**
- **“I” MUST BUT I CAN’T**
- **“X”-POSURE: FEAR OF BOTH FAILURE AND SUCCESS**
- **“S”ELF SABOTAGE**



Zimbardo, P.G. (2000). The Personal and Social Dynamics of Shyness: Adults and Children. Paper presented at the 50th Annual Arizona Psychological Association Conference, October 21, 2000, Tucson, AZ.

Shyness Treatment



- I asked Zimbardo what he thought those who had neurobiological disorders who were genetically shy needed most and he said, “Training in the skills to make legitimate excuses.”

Zimbardo, P.G. (2000). The Personal and Social Dynamics of Shyness: Adults and Children. Paper presented at the 50th Annual Arizona Psychological Association Conference, October 21, 2000, Tucson, AZ.

Shyness Treatment



- **Cognitive Behavioral Therapy and Antidepressant Medication works 80% of the time with 5 year follow-up. Thought to be best method of treatment (Richard Heimberg, Ph.D.).**

Dittmann, M. (July/August, 2005). Stemming Social Phobia. Monitor On Psychology, 36 (7), pp. 92-94.

Heimberg, R.G., Liebowitz, M.R., Hope, D.A., Scheier, F.R., Holt, C.S., Welkowitz, L.A., Juster, H.R., Campeas, R. Bruch, M.A., Cloitre, M, Fallon, B., Klein, D.F. (1998). Cognitive Behavior Group vs Phenelzine Therapy for Social Phobia. Archives of General Psychiatry, 55, p. 1133-1141.

Treatment of Social Anxiety/Shyness



- **Zimbardo (2000) described a 26 week treatment program at his shyness clinic that includes the following: Cognitive Behavior Modification/Cognitive Restructuring, Self-Esteem Restructuring, Support Groups, Practice, Medications, Video Social Skills Training, Encouragement, etc.**
- **www.shyness.com and www.shynessinstitute.com**

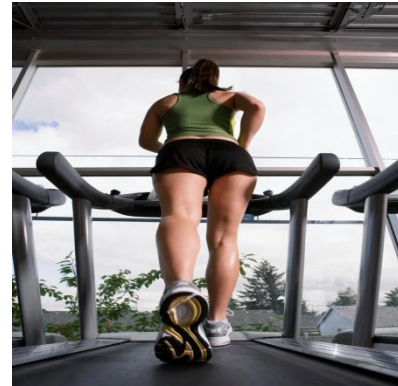
Zimbardo, P.G. (2000). The Personal and Social Dynamics of Shyness: Adults and Children. Paper presented at the 50th Annual Arizona Psychological Association Conference, October 21, 2000, Tucson, AZ.

Treatment of Social Anxiety/Shyness



- Henderson, L. (2011). Improving Social Confidence and Reducing Shyness Using Compassion Focused Therapy. Oakland, CA: New Harbinger.
- Henderson, L. (2009). Social Fitness Training Manual: A Cognitive-Behavioral Approach to Treating Shyness and Social Anxiety Disorder. Berkley, CA: The Shyness Institute.

Treatment of Social Anxiety/Shyness



- **Aerobic Exercise:**
 - “As for the trait, the majority of studies show that aerobic exercise significantly alleviates symptoms of any anxiety disorder.” (p. 92)

Ratey, J. (2008). Spark: The Revolutionary New Science of Exercise and The Brain. New York, NY: Little, Brown.

Good Resources on Exercise and Counseling



- Ratey, J.J. (Fall, 2010). Your Brain On Exercise. ADDitude, 11 (1), 36-39.
- Ratey, J.J. (2008). Spark: The Revolutionary New Science of Exercise and The Brain. New York, NY: Little, Brown.
- *Always consult a physician before starting an exercise program!*

People and Organizations Who Can Help With Social Anxiety/Shyness

- American Psychiatric Association:
www.apa@psych.org
- American Psychological Association: www.apa.org
- American Association of Marriage and Family Therapists:
www.aamft.org
- National Board of Certified Counselors:
www.nbcc@nbcc.org
- National Association of Social Workers: www.naswdc.org
- Anxiety Disorder Association of America: www.adaa.org



Emotional Salience Landscape Difficulties- Mirror Neurons

- **Problems in the amygdala and lack of emotional salience landscape may account for sensory sensitivity.**
- **These problems are found in those with Autism Spectrum Disorders.**
- **Insula/Amygdala : pain & disgust**

Ramachandran, V.S. and Oberman, L.M. (November, 2006). Broken Mirrors.
Scientific American, 296(5), pp. 62-69.



Emotional Salience Landscape Difficulties- Mirror Neurons



“In a typical child, sensory information is relayed to the amygdala, the gateway to the emotion-regulation limbic system. Using input from stored knowledge, the amygdala determines how the child should respond emotionally to each stimulus, creating a salience landscape of the child’s environment. In children with autism, the connections between the sensory areas and the amygdala may be altered, resulting in extreme emotional responses to trivial events and objects.” (p. 68)

Ramachandran, V.S. and Oberman, L.M. (November, 2006). Broken Mirrors. Scientific American, 296(5), pp. 62-69.

Emotional Salience Landscape Difficulties- Mirror Neurons



When the child with Autism Spectrum Disorder looks into another's eyes:

- 1. The “...altered connection between the cortex and amygdala distorts (the) child’s response.**
- 2. (The) Amygdala triggers the autonomous nervous system, raising heart rate.**
- 3. (As a result the) Child looks away to reduce stress.” (p. 68)**

Ramachandran, V.S. and Oberman, L.M. (November, 2006). Broken Mirrors. Scientific American, 296(5), pp. 62-69.

Emotional Salience Landscape Difficulties- Mirror Neurons



“People with autism show reduced mirror neuron activity in the inferior frontal gyrus, a part of the brain’s premotor cortex, perhaps explaining their inability to assess the intentions of others. Dysfunctions of mirror neurons in the insula and anterior cingulate cortex may cause related symptoms, such as the absence of empathy, and deficits in the angular gyrus may result in language difficulties. People with autism also have structural changes in the cerebellum and brain stem.” (p. 65)

Ramachandran, V.S. and Oberman, L.M. (November, 2006). Broken Mirrors. Scientific American, 296(5), pp. 62-69.

What To Do With Your Eyes When You Have Eye Gaze Problems

- **People stare at you because they want to know if you are interested in them.**
- **Look toward peoples' eyes and cheekbones.**
- **Use media to disconnect sound from faces.**
- **If you don't use eye contact others will emotionally leave you.**

Garcia Winner, M., and Crooke, P. (2011). Social Thinking At Work: Why Should I Care. San Jose, CA: Social Thinking.



Creating More Oxytocin



Interactive touch between humans can produce more oxytocin in the brain. It can even increase one's level of trust.

Morhenn, V.B., Park, J.W., Piper, E., and Zak, P.J. (November, 2008). Monetary Sacrifice Among Strangers is Mediated by Endogenous Oxytocin Release After Physical Contact. Evolution and Human Behavior, 29 (6), pp. 375-383.

Oxytocin and Squeezing



Many Native American cultures used cradleboards to carry their infants.



Emotional Salience Landscape Difficulties-Mirror Neurons

- Temple Grandin’s “squeeze machine”
- Hirstein’s “squeeze vest”
Elmhurst College
- Risperidone or MDMA (ecstasy)
- Biofeedback
- Under Armor-- Compression underwear:
www.underarmour.com



Grandin, T (1992). Calming Effects of Deep Touch Pressure in Patients with Autism, College Students, and Animals. Journal of Child and Adolescent Psychopharmacology, 1 (2). From website:
www.grandin.com/inc/squeeze.html

Ramachandran, V.S. and Oberman, L.M. (November, 2006). Broken Mirrors. Scientific American, 296(5), pp. 62-69.

Author (1997). Use of “Atypical” Neuroleptics in the Treatment of PDDs. MedScape Psychiatry & Mental Health e Journal, 2 (4): www.medscape.com/viewarticle/430897_5

THE ABOVE ARE EXPERIMENTAL TREATMENTS!!!!

Multisensory Processing in ASD

- Found that ASD children did not integrate multisensory (auditory-somatosensory) stimuli as well as non-disabled children.
- Will next investigate Sensory Integration Training for efficacy given these results.
- Molholm stated ASD children have difficulty simultaneously processing faces and voices.

Russo, N., Foxe, J.J., Brandwein, A.B., Gomes, T., Altschuler, H., Molholm, S. (October, 2010). Multisensory Processing with Autism: High-Density Electrical Mapping Auditory-Somatosensory Integration. *Autism Research*, 3 (5), 253-267.

Hamilton, J. (June 2, 2011). Looking for Early Signs Of Autism In Brain Waves. Washington, DC: National Public Radio: <http://www.npr.org/2011/06/02/136882002/looking-for-early-signs-of-autism-in-brain-waves>

Rajarshi (Tito) Mukhopadhyay



“I can do only one thing at a time. I can use my eyes or use my ears. Hearing my voice screaming would stop my eyes from looking...After hearing the words of her song (his mother’s, sic.), I would wonder why I could no longer hear my voice screaming. And, to my relief, I would realize that my voice had stopped screaming.”

Mukhopadhyay, T.R. (2011). How Can I Talk If My Lips Don’t Move? Inside My Autistic Mind. New York, NY: Arcade.

Rajarshi (Tito) Mukhopadhyay



“I could focus all my concentration on only one sense and that is hearing. I am not sure whether or not I had to put any kind of effort into hearing because I was too young and uninformed in science to analyze the sensory battle that was taking place in my nervous system.”

Mukhopadhyay, T.R. (2011). How Can I Talk If My Lips Don't Move? Inside My Autistic Mind. New York, NY: Arcade.

Rajarshi (Tito) Mukhopadhyay



“The shattered senses can stop all thought processes making it impossible to continue doing an activity that involves reasoning or using the voluntary muscles of the body.”

“I usually flap my hands to distract my senses to a kinesthetic feel, so that my senses may be recharged.”

Mukhopadhyay, T.R. (2011). How Can I Talk If My Lips Don't Move? Inside My Autistic Mind. New York, NY: Arcade.

“Face Blindness”

Developmental Prosopagnosia





Problems Remembering Faces

- **Prosopagnosia**: Inability to recognize faces, even one's own face.” (p. 1168)

Taber's (1981). Taber's Cyclopedic Medical Dictionary. Philadelphia, PA:F.A. Davis

- **Joaachim Bodamer, M.D. 1947**: German soldiers with brain injuries who could no longer see faces coined term. “*Prosopon*” meaning face + “*agnosia*” meaning nonrecognition from Greek.

Grueter, T. (August/September, 2007). Forgetting Faces. Scientific American: Mind, **18** (4), 68-73.

Prosopagnosia



- Possible Associated Conditions:
 - Problems with recognition of facial expression of emotion
 - Problems with gender of face discrimination
 - Problems with age of face discrimination
 - Problems with **TOPOGRAPHAGNOSIA**: difficulty with personal navigation; getting lost easily
 - Asperger's Disorder

Galaburda, A.M. and Duchaine, B.C. (2003). Developmental Disorders of Vision. Neurologic Clinics, 21 (3), 687-707.

Prosopagnosia



- **Possible Associated Conditions:**
 - **Central Auditory Processing Disorder (CAPD):**
“The inability to understand spoken language in a meaningful way in the absence of what is commonly considered a hearing loss.” (Sineps and Hunter, 1997)

Duchaine, B.C. (2000). Developmental Prosopagnosia with Normal Configural Processing. Cognitive Neuroscience and Neuropsychology. 11 (1), 79-82.

Choisser, B. (August, 14, 2007). Face Blind! From website: www.choisser.com/faceblind/about.html, p. 7 of 10.

Sineps, D. and Hunter, L. (1997). I Can Hear But...When Auditory Perception and Listening Break Down: Implications For Language and Reading. Paper presented at the International Dyslexia Association Annual Conference, Minneapolis, MN, November 13, 1997, Session T-45.

Rajarshi (Tito) Mukhopadhyay



“In order to get a permanent impression of someone’s face, I needed some time. How much time? It depends on how much interaction with the voice generating from the face has with me.” He identifies people by their voice.

Mukhopadhyay, T.R. (2011). How Can I Talk If My Lips Don’t Move? Inside My Autistic Mind. New York, NY: Arcade.

Prosopagnosia



- **Remembering Faces:**
 - This is an important ability for survival.
 - It lets you know “friends and foes.”
 - It helps you maintain relationships.
 - It helps you remember the social status of others.

Ratey, J.J. (2001). A User’s Guide to the Brain: Perception, Attention and the Four Theaters of the Brain. New York, NY: Vintage.

Symptoms of Prosopagnosia



- **Extreme difficulty recognizing faces. Even with a person who is well known by the sufferer (i.e., a parent, spouse, best friend, etc.).**
- **Appears aloof/arrogant, does not respond to people they “know” when they see them.**
- **Often complain they cannot follow movies or TV shows because they cannot remember the identity of characters.**
- **They tend to recognize people by hair, gait, clothing, voice, context or other information.**

Author (August 14, 2007). www.faceblind.org/research, p. 1 of 3.

Additional Symptoms of Prosopagnosia Found in Children And Adolescents



- It may take them months to recognize their classmates.
- School transition may be a problem.
- Extreme separation anxiety and stranger wariness may be present.
- Changes in the appearance of others (i.e., new glasses, new hair style, etc.) may be a problem.
- Feelings of frustration, isolation and embarrassment

Grueter, T. (August/September, 2007). Forgetting Faces. Scientific American: Mind, 18 (4), 68-73.

Face Perception

- **The right Fusiform Gyrus typically does not respond to objects.**
- **This area reorganizes faces into wholes.**
- **The fusiform gyrus helps to differentiate between visually similar stimuli.**
- **Greebles-novices treat them as objects and experts treat them in a holistic manner.**

Gauthier, I. (November 3, 2004). Face Processing: Is It Hard-wired or Learned? Evidence from Brain Imaging Studies. Paper presented at the 55th Annual International Conference seminar, *The Neural Basis of Reading and Other Forms of Skill Acquisition*, Philadelphia, PA, Session: W-1.

Gauthier, I., and Tarr, M.J. (1997). Becoming a “Greeble” Expert: Exploring Mechanisms for Face Recognition. Vision Research, 37 (120), 1673-1682.

Developmental Prosopagnosia



- “The hereditary type of prosopagnosia has an autosomal dominant type of inheritance. This means that men and women are affected in equal numbers. In our experience women are more willing to talk about their face recognition problems, though.” (Thomas Grueter, M.D.)
- If one parent has Prosopagnosia their child has a 50% chance of having it.

Grueter, T. (August 14, 2007). Personal Communication.

Grueter, T. (August/September, 2007). Forgetting Faces. Scientific American: Mind, 18 (4), 68-73.

Kennerknerht, I., Grueter, T., Wellinh, B, Wentzek, S, Horst, J., Edwards, S. and Gueter, M. (June, 2006). First Report of Prevalence of Non-Syndromic Hereditary Prosopagnosia. American Journal of Medical Genetics, Part A, 140A (15), Pages 1617-1622 (From abstract).

Face Perception



- Adults and adolescents with Autism lack specialization for faces in the right fusiform gyrus, they use it for other things: toilet plungers, etc.
- Left fusiform gyrus (“Word Form Area”) responds somewhat to strings of letters of the same font and to real words not non-words.
- Letters are not processed like shapes or strings.

Gauthier, I. (November 3, 2004). Face Processing: Is It Hard-wired or Learned? Evidence from Brain Imaging Studies. Paper presented at the 55th Annual International Conference seminar, *The Neural Basis of Reading and Other Forms of Skill Acquisition*, Philadelphia, PA, Session: W-1.

Face Perception

- **The Fusiform Face Area (FFA) responds much more to faces than to other objects.**
- **Nine different labs have found that those with Autism Spectrum Disorders have a hypoactivation of the FFA when viewing faces.**
- **Developmental Prosopagnosia and Developmental Agnosia are separate disorders.**

Schultz, R.T. (2005). Developmental Deficits in Social Perception in Autism: The Role of the Amygdala and Fusiform Face Area. International Journal of Developmental Neuroscience, 23, 125-141.

Duchaine, B. and Nakayama, K. (2005). Dissociations of Face and Object Recognition in Developmental Prosopagnosia. Journal of Cognitive Neuroscience, 17, 249-261 (From Abstract).

Who Is at Risk for Prosopagnosia?



- **Those with Asperger's Disorder are at risk for not remembering faces.**

Attwood, T. (2007). The Complete Guide to Asperger's Syndrome. Philadelphia, PA: Jessica Kingsley, p. 130.

Prosopagnosia and Autism Spectrum Disorders



“Although not part of current diagnostic criteria, much evidence suggests that persons with ASD have marked deficits in face perception.” (p. 127)

Schultz, R.T. (2005). Developmental Deficits in Social Perception in Autism: The Role of the Amygdala and Fusiform Face Area. International Journal of Developmental Neuroscience, 23, 125-141.

Treatment of Prosopagnosia

- **“Prosopagnosics cannot be cured, but they can and do learn ways to recognize people.”
(p. 70)**

Grueter, T. (August/September, 2007). Forgetting Faces. Scientific American: Mind, 18 (4), 68-73.



Treatment of Prosopagnosia



“A treatment programme on training in perception, and analysis of facial features and familiar-face naming was conducted. Treatment resulted in excellent face naming for familiar faces, a decreased reliance on nonfacial cues and a reduction in the tendency to misidentify unfamiliar faces as family members.” (p. 1 of 2)

Brunsdon, R., Coltheart, M. Nickels, L. and Jay, P. (September 2006). Developmental Prosopagnosia: A Case Analysis and Treatment Study. Cognitive Neuropsychology. 23 (6), 822-840 (From abstract).

Treatment of Prosopagnosia: “Are you my Mother?”

- **Encourage the person to look at peoples faces when socializing.**
- **Introduce new people slowly and emphasize their characteristics: “Say hi to Billy with the red hair and freckles.”**
- **Have adolescents meet teachers long before school starts and have the child meet with them often.**
- **Have teachers keep their appearance “stable.”**
- **Play introduction games.**
- **Post photos of teachers, friends, parents on wall.**

Grueter, T. (August/September, 2007). Forgetting Faces. Scientific American Mind, 18 (4), 68-73.

Computer Programs to Treat Prosopagnosia

(Research-42)

- “Let’s Face It!” – Face Recognition Program and workbook for children and adolescents with Autism Spectrum Disorders (University of Victoria Brain and Cognition Lab & the Yale Child Study Center)
- Teaches facial recognition and emotion recognition in 20 hours!
- It is **FREE!**



From: <http://web.unic.ca/~letsface/letsfaceit/index.php>

Mnemonic Techniques to Remember Faces

- Lucas, J. (2000). Names and Faces Made Easy: The Fun Way To Remember People. Lucas.
- www.jerrylucas.com



Prosopagnosia of Facial Expressions



Prosopagnosia of Facial Expressions



**“Face perception can be subdivided into two general types – recognition of person identity via the structures of the face and recognition of internal affective states based on the shape of individual features and changes in their relative distance from one another during the expression.”
(p. 128)**

Schultz, R.T. (2005). Developmental Deficits in Social Perception in Autism: The Role of the Amygdala and Fusiform Face Area. International Journal of Developmental Neuroscience, 23, 125-141.

Problems Making the Appropriate Facial Expression to Match How One Feels and What is Appropriate to The Situation

❖ **Attwood's (2007) story of the boy with Asperger's Disorder who saw his mother crying and asked, "What face do I make?" (p. 134)**

Attwood, T. (2007). The Complete Guide to Asperger's Syndrome. Philadelphia, PA: Jessica Kingsley, p. 135.



Recognizing Emotional Facial Expressions



- **Emotional Facial Expression Recognition:**
 - **“Does this mean we come into the world expecting to see human faces and ready to respond with our own prewired facial expressions?” Yes!” (Ratey, 2001, p. 300)**

Ratey, J. J. (2001). A User’s Guide to the Brain: Perception, Attention, and the Four Theaters of the Brain. New York: NY: Vintage.

Children and Facial Expressions



“An early skill that has been found to be important for the development of additional social ability is the ability to understand and recognize facial expressions appropriately. These expressions allow the child to understand the other’s mood reaction to their behavior and adapt accordingly...These skills develop early and have been found already present in the preschool years.” (p. 7)

Semrud-Clickman, M. (2007). Social Competence in Children. New York, NY: Springer, p. 76.

ASD and Processing Facial Expressions

“Hypoactivation of the FFA and related ‘social brain’ areas in response to facial stimuli is one of the most consistently reported fMRI findings in autism. We have shown that activation in a range of brain areas, including the FFA, is significantly reduced in autism compared with controls in response to emotional versus neutral faces, and further more our findings indicate that the response within the FFA itself differs significantly between siblings and controls.” (p. 6 of 7)

Spencer, M.D., Holt, R.J., Chura, L.R., Suckling, A.J, Calder, E.T., and Baron-Cohen, S. (2011). A novel functional brain imaging endophenotype of autism: the neural response to facial expression of emotion. Translational Psychiatry, 1, e19, doi:10.1038/tp.2011.18.

ASD and Processing Facial Expressions

“Our findings suggest that an atypical implicit response to facial expression of emotion may form the basis of impaired emotional reactivity in autism and in the broader autism phenotype in relatives. These results demonstrate that the fMRI response to facial expression of emotion is a candidate neuroimaging endophenotype for autism and may offer far-reaching insights into the etiology of autism” (p. 1 of 7).

Spencer, M.D., Holt, R.J., Chura, L.R., Suckling, A.J, Calder, E.T., and Baron-Cohen, S. (2011). A novel functional brain imaging endophenotype of autism: the neural response to facial expression of emotion. Translational Psychiatry, 1, e19, doi:10.1038/tp.2011.18.

Facial Expressions



❖ Remembering Expressions:

❖ The non-disabled are “pre-wired” to find the human face and voice the most important stimuli in the world.

❖ Those with Asperger’s Disorder (AD) don’t look at the eyes they look at the mouth. Differentiated those with AD from non-disabled 100% of the time.

Klin, A. (October 11-12, 2001). Autism, Asperger’s and the PDD Spectrum. Seminar presented at the 33rd Annual Arizona Association of School Psychologists Conference, Mesa, AZ.

Volkmar, F.(April 23, 2003). Asperger Syndrome: Clinical Features, Assessment, and Intervention Guidelines. Seminar presented by New England Educational Institute, Phoenix, AZ

Decoding Skill and Facial Expression

- **Positive emotions are the easiest to decode.**
- **Negative emotions are the most difficult.**
- **Poor interpreters of facial expression have less social acceptance and poorer adjustment.**



Semrud-Clikeman, M. (Spring, 2003). Executive Function and Social Communication Disorders. Perspectives, 29 (2), p. 20-22.

Semrud-Clikeman, M. (2007). Social Competence in Children. New York, NY: Springer.

Decoding Skill and Facial Expression



- **Attwood (2007) stated those with Asperger's Disorder have great difficulty decoding faces.**

Attwood, T. (2007). The Complete Guide to Asperger's Syndrome. Philadelphia, PA: Jessica Kingsley, p. 130.

Treating Problems Reading Facial Expressions

- Volkmar, F. (April 23, 2003). Asperger Syndrome: Clinical Features, Assessment, and Intervention Guidelines. Seminar presented by the New England Educational Institute, Phoenix, AZ.
- Gauthier, I. and Tarr, M.J. (1997). Becoming a “Greeble” Expert: Exploring Mechanisms for Face Recognition. Vision Research, 37 (12), 1673-1682.

• ***FACIAL EXPRESSIONS CAN BE TAUGHT!***



Computer Programs to Treat Prosopagnosia (RESEARCH-60 to 61)



- Baron-Cohen, S. (2003). Mind Reading: An Interactive Guide To Emotions. Philadelphia, PA: Jessica Kingsley.

“Harry Potter” teaches facial expressions.

- Baron-Cohen, S., Drori, J., Harcup, C. (2009). The Transporters (USA Version). London, England: Changing Media Development: www.thetransporter.com

“Thomas the Tank-Engine” teaches faces.



Computer Programs to Treat Prosopagnosia



- “Gaining Face”: www.StoneMountainSoftware.com
- Paul Ekman, Ph.D. (“Lie to Me”/SPOT – Surveying Passengers by Observational Techniques) CD ROMS:
 - Micro Expression Training Tool (METT)
 - Subtle Expression Training Tool (SETT)
 - Repeated presentations of METT & SETT to those with Autism Spectrum Disorders
 - Available from: www.paulekman.com



Treating Problems Making & Reading Facial Expressions

- **Cognitive Affective Training-Faces and Feeling Words: www.CAT-kit.com**
- **Student Handout: Emotions and Facial Expressions – From: McAfee, J. (2002). Navigating the Social World. Arlington, TX: Future Horizons, pp 83-84.**
- **Ekman, P., & Friesen, W.M. (2003). Unmasking The Face: A Guide To Recognizing Emotions From Facial Cues. Cambridge, MA: Malor Books.**
- **Ekman, P. (2003). Emotions Revealed: Recognizing Faces and Feelings to Improve Communication and Emotional Life. New York, NY: Time Books.**



Other Methods of Learning Facial Expressions

- Watch children's shows like Barney and Sesame Street and observe the difference between the facial expression reactions of children and adults.
- Watch TV with the sound turned off and look at the face.
- You can see extreme emotions on soap operas, animated movies (i.e., Toy Story) claymation (Wallace and Grommit).

Garcia Winner, M., and Crooke, P. (2011). Social Thinking At Work: Why Should I Care. San Jose, CA: Social Thinking.



Facial Expression Training & Autism



- **“Even when people with autism spectrum disorders can figure out what someone’s eyes or face conveys, they do so in a different way than everyone else, which may be less efficient or take more time.” (p. 62)**
- **The non-disabled use the temporal lobe and fusiform gyrus to decode facial expressions.**

Ozonoff, S., Dawson, G. and McPartland, J. (2002). A Parent’s Guide to Asperger Syndrome and High – Functioning Autism. New York, NY: Guilford.

Facial Expression Training & Autism

- **Those with Asperger's used the frontal lobes far less and did not activate the amygdala. They used other areas of the brain not designed for such tasks.**
- **Those with Asperger's may use voice, touch, etc. to recognize others, not their face.**

Ozonoff, S., Dawson, G. and McPartland, J. (2002). A Parent's Guide to Asperger Syndrome and High – Functioning Autism. New York, NY: Guilford.



ASD Treatment Plan for Social Skills



- ❖ **Verbal Mediation of Poor Visual-Spatial Abilities**
 1. **Describe pictures in detail verbally**
 2. **Teach the relationship between objects and pictures**
 3. **Describe social interactions in movies**
 4. **Videotape child or adolescent in social situations and teach from that**

Rourke, B.P. (1995). Syndrome of Nonverbal Learning Disabilities: Neurodevelopmental Manifestations. New York, NY: Guilford.

NVLD/Asperger's Suggestions

- Photographs
- Movies
- Role Playing
- Coaching with mental health back-up
- “Rent a Friend”



Nowicki, S. and Duke, M. (2002). Will I Ever Fit In? New York, NY: Free Press.

Attwood, T. (1998). Asperger's Syndrome: A Guide for Parents and Professionals. Philadelphia, PA: Jessica Kingsley.

Social Thinking

- “Social thinking is how we think about our own and others’s minds.” (p. 2)

Garcia Winner, M. and Crooke, P. (2011). Social Thinking At Work: Why Should I Care. San Jose, CA: Social Thinking.



Four Steps of Communication

1. **“Think about the people with whom you want to communicate.**
2. **Use your body to establish a physical presence.**
3. **Use your eyes to think about people as you relate to them.**
4. **Use your words to relate to people when you talk to them.” (p. 71)**

Garcia Winner, M., and Crooke, P. (2011). Social Thinking At Work: Why Should I Care. San Jose, CA: Social Thinking.

Teaching Social Thinking

“Results indicated significant changes from pre to post measures on both verbal/nonverbal “expected” and “unexpected” behaviors, significant increases in the subcategories of expected verbal, listening/thinking with eyes and initiations with robust decreases in the subcategories of unexpected–verbal and unexpected nonverbal. Importance of social cognitive approaches for children with AS and HFA is discussed.”

Crooke, P., Hendrix, R., and Rachman, J.Y. (2007). Brief Report: Measuring the Effectiveness of Teaching Social Thinking to Children with Asperger’s Syndrome (AS) and High Functioning Autism (HFA). Journal of Autism and Developmental Disorders, 38 (3), 581-591.

Excellent Social Skills Program

Social Thinking Center

Innovative, Practical Treatment of High-Functioning Autism, Asperger's Syndrome, NLD, ADHD and other Undiagnosed Social-Cognitive Challenges

The Social Thinking Center

3031 Tisch Way, Suite 800

San Jose, CA 95128

Phone (toll free): 877-464-9278

Website: www.socialthinking.com

Social Competence Intervention Program (SCIP)

“SCIP is an intervention that is multi-sensory in nature and targets underlying difficulties in social perception as well as providing exercises to improve the generating of strategies for problem solving”. (p. 104)

Semrud-Clickman, M. (2007). Social Competence in Children. New York, NY: Springer, p. 104.

Body Language



➤ Making SENSE in Conversations:

- Space, Eye Contact, Nod, Statements of Encouragement, Expression (Face/Body)

McAfee, J. (2002). Navigating the Social World: A Curriculum for Individuals with Asperger’s Syndrome , High Functioning Autism and Related Disorders. Arlington, TX: Future Horizons, p. 102-108.

➤ Baron-Cohen, S. (2003). Mind Reading: An Interactive Guide To Emotions. Philadelphia, PA: Jessica Kingsley.

“Harry Potter” teaches facial expressions.

Social Skills

McAfee, J. (2002). Navigating the Social World: A Curriculum for Individuals with Asperger's Syndrome , High Functioning Autism and Related Disorders. Arlington, TX: Future Horizons.



NVLD/Asperger's/ASD Suggestions

❖ Tony Attwood says:

- Help ASD child develop a large vocabulary of emotional thought.
- Teach them how to use an emotional thermometer for expressive thought and interpreting receptive communication.

Attwood, T. (2007). The Complete Guide to Asperger's Syndrome. Philadelphia, PA: Jessica Kingsley, 155-156.

Emotional Seeing Eye Dogs

- **Dogs separated from wolves about 135,000 years ago.**
- **Dogs lived with humans 100,000 years ago; even before we were “modern humans” (Homo Habilis).**
- **Dog and humans co-evolved.**
- **Humans learned to think and act like dogs.**
- **Dogs allowed humans to hunt big game while they acted as guards and lookouts. Humans did more planning and organization activities.**
- **14,000 years ago humans domesticated dogs.**
- **Homo Sapien Neantathalensis did not have dogs; they are extinct.**
- **In the past 100,000 years dogs brains shrank by 10 to 30%; mostly in their forebrains. Humans’ brains shrank by 10%; mostly in the midbrain, sensory and smell areas.**
- **Dogs have a symbiotic relationship with humans and have a genetic predisposition to understand human emotions.**

Grandin, T. (2005). Animals in Translation. New York, NY: Simon & Schuster.

Dog-Human Interaction

“Domestic dogs...have a remarkable sensitivity to human actions and intentions.” (p. 102)

“...dogs can effectively cue their human caregivers to find a food item or toy that the dog, but not the human had seen hidden.” (p. 103)

Dogs pay attention to human body language and gaze.

Wynne, C., Dorey, N.R., and Udell, M.R. (2011). The Other Side of the Bond: Domestic Dogs' Human-Like Behaviors. In P. McCarde, S. McCune, J.A. Griffin, and V. Maholmes (Eds.), How Animal Affect Us: Examining the Influence of Human-Animal Interaction on Child Development and Human Health. Washington, DC: American Psychological Association, 101-115.

Dog-Human Interaction

“In general, this literature shows that a human–dog interaction has a positive influence on human social interaction and also acts as a stress reducer in humans.” (p. 53)

Uvnas-Moberg, K., Handlin, L., and Petersson, M. 2011). Promices and Pitfalls of Hormone research in Human-Animal Interaction. In P. McCarde, S. McCune, J.A. Griffin, and V. Maholmes (Eds.), How Animal Affect Us: Examining the Influence of Human-Animal Interaction on Child Development and Human Health. Washington, DC: American Psychological Association, 53-81.

Dog-Human Interaction

“Our results indicate that concentrations of beta-endorphin, oxytocin, prolactin, beta-phenylethylamine, and dopamine increased in both species after positive interspecies interaction, while that of cortisol decreased in the humans only.” (p. 296)

Odendaal, J.S., and Meintjes, R.A. (2003). Neurophysiological Correlates of Affiliative Behavior Between Humans and Dogs. Veterinary Journal, 165(3), 296-301.



ASD and Dogs

- **Children with autism and pervasive developmental disorders are significantly more present, playful and aware of social interactions when a dog is present.**

Martin, F, and Farnum, J. (2002). Animal Assisted Therapy for Children with Pervasive Developmental Disorders. Western Journal of Nursing Research, 24(6), 657-670.



ASD and Dogs

“The themes were (a) the dog as a sentinel of safety, (b) gaining freedom through enhanced safety, facilitating public outings and family activities, and (c) improving social recognition and status, in which the presence of the dog promoted awareness of autism and affected social interaction. The triadic relationship between parent, autistic child, and service dog constantly evolves.” (p. 1642)

Burrows, E., Adams, C.L., and Spiers, J. (November 13, 2008). Sentinels of Safety: Service Dogs Ensure Safety and Enhance Freedom and Well-Being for Families With Autistic Children. Quantative Health Research, 18(12), 1642-1649.

Emotional Seeing Eye Dogs



- **4Paws For Ability**
253 Dayton Avenue
Xenia, OH 45385
- **Training Center:**
937-374-0385
- **Website:**
www.4pawsforability.org

Dogs may have a rudimentary mirror neuron system!

Blakeslee, S. (January 10, 2006). Cells That Read Minds. New York Times; From website:
www.nytimes.com/2006/01/10/science/10mirr.html?pagewanted=1&_r=1.

Emotional Seeing Eye Dogs

- International Association of Assistance Dog Partners': www.iaadp.org
- Autism Service Dogs of America: www.autismservicedogsofamerica.com
- Wilderwood Service Dogs for Autism: www.autism.wilderwood.org
- Assistance Dogs for Autism: www.autismassistancedog.com
- Northstar Foundation/Service Dogs for Autism: www.northstardogs.com/autism.shtml



Career Development



Dr. Temple Grandin



“During my travels to many autism conferences I have observed many sad cases of people with autism who have successfully completed high school or college but have been unable to make the transition into the world of work. Some have become perpetual students because they thrive on the intellectual stimulation of college.”

Grandin, T. (1996). Making the Transition from the World of School into the World of Work. Bloomington, IN: University of Indiana Resource Center for Autism. From Website: <http://www.iidc.indiana.edu/index.php?pageId=599>

Barriers for Employment for those with ASD

Attwood, T. (2007). The Complete Guide to Asperger's Syndrome. Philadelphia, PA: Jessica Kingsley

- **Poor time keeping**
- **Poor organizational skills**
- **Lack of concentration**
- **Difficulty multitasking**
- **Poor social skills**
- **Difficulty coping with change**



State/Federal Work Transition

- **Pacer Center Project C3:**
 - Designed for those with disabilities to improve postsecondary and employment outcomes.
 - Teaches parents and professionals about services available
 - Helps children and adolescents with disabilities prepare for adulthood and self-advocacy
- www.pacer.org/c3

College Internship Program

“CIP provides individualized social, academic, career and life skills instruction for students with Asperger's, Nonverbal, PDD-NOS, ADHD and other Learning Differences. Students obtain the skills necessary to inspire independence and expand the foundation on which they can build a happy and productive life.”

Website: www.cipworldwide.org/about.html

Private Transition Programs

- **Options Program at Brehm (Carbondale, IL):**
 - **Structured living environment and independent living skills training**
 - **Social skills training**
 - **Academic training:**
 - **College transition track**
 - **Certificate transition track**
- **www.options.brehm.org**



Other College Preparation Programs

- **Landmark College:**
 - Putney, VT
 - Website: www.landmark.edu/
- **Say YES (Your Education Solution) to College**
 - A College Transition Program for Students with Disabilities, Old Dominion University Campus
 - Phone: 757-683-3639
- **Wax, I.F., and Kravets, M. (2005). K & W Guide to Colleges for Students with Learning Disabilities or Attention Deficit Disorder, 8th Edition (College Admissions Guides). Princeton, NJ: Princeton Review.**



APSE: Association for Persons in Supportive Employment

- **This is an association of on-site job coaches.**
- **Address: 416 Hungerford Dr., Suite 418, Rockville, MD 20850;**
- **Phone: 301-279-0060**
- **Fax: 301.279.0075**
- **Website: www.apse.org**



Transition Services/Job Coaching

- **Similar programs in Great Britton have had as much as a 70% employment rate for ASD adults over several years (Prospects Employment Service, National Autistic Society, Great Britton).**

Attwood, T. (2007). The Complete Guide to Asperger's Syndrome. Philadelphia, PA: Jessica Kingsley, p. 299.



Workplace Accommodations

Job Accommodations Network

P. O. Box 6080

Morgantown, WV 26506-6080

Voice/TTY (in US): 1-800-526-7234

Voice/TTY (Worldwide): 1-304-293-7186

Fax: 1-304-293-5407

Web: www.askjan.org

Workplace Accommodations

- **The Job Accommodations Network has a link on its website called SOAR (Searchable Online Accommodation Resource):**
- **“A grocery stock person with Autism cannot remember to wear all parts of his uniform. JAN suggested taking a picture of the employee in full uniform. Give him the picture and allow him to use the picture as reference when preparing for work. Approximate accommodation cost is \$5”.**
- **<https://askjan.org/soar/MR/MRex.html>**

Workplace Accommodations

- **Center for Assistive Technology and Environmental Access (CATEA): “...a multidisciplinary engineering and design research center dedicated to enhancing the health, activity and participation of people with functional limitations through the application of assistive and universally designed technologies in real world environments, products and devices”.**
- **CATEA: <http://www.catea.gatech.edu/>**

AHEAD



- **Association on Higher Education and Disability (AHEAD):**
- **Comeau, L. & Cronin, M. (2011). The Essential Six, Volume One (A Parent's Guide: How to Pave the Road to Self-Advocacy for College Students with Learning Differences).
Huntersville, NC: AHEAD.**
- **www.ahead.org**

Interest to Career Help

- **O-net Online: “O-NET Online has detailed descriptions of the world of work for use by job seekers, workforce development and HR professionals, students, researchers, and more!”**
- **www.onetcenter.org**



The Wall Street Journal

Temple Grandin says that articles about workplace behavior have been very helpful for her in learning about and understanding work environments. She recommends people on the spectrum subscribe to it to get helpful workplace hints.

Grandin, T. (2011). The Way I See It: A Personal Look at Autism & Asperger's Second Edition. Arlington, TX: Future Horizons.

American College Testing (ACT): Documentation Requirements

- **ACT Policy for Documentation to Support Requests for Test Accommodations on the ACT (No Writing) or ACT Plus Writing:**
<http://www.act.org/aap/disab/policy.html>
- **ACT Services for Students with Disabilities:**
www.act.org/aap/disab/



Self-Advocacy



Self-Awareness

“Not only does accurate self-awareness help motivate the learning process, but it also leads to more efficient self-advocacy. With accurate knowledge one can plan better how to deal with otherwise frustrating situations.” (p. 11) “It takes a modicum of self-esteem to tolerate thinking about what difficulties you have. Many students who have had many academic and social difficulties are in no position to tolerate any critical feedback about their behavior. Without being able to tolerate such feedback their personal growth is stymied.” (p. 14)

Baker, J. (2005). Preparing for Life: The Complete Guide for Transitioning to Adulthood for those with Autism and Asperger’s Syndrome. Arlington, TX: Future Horizons.

Self-Awareness: Evaluation

The student needs a thorough evaluation which can be done by the public school's special education evaluation team, or the parent/guardian of the student can obtain this for the student privately. Such an evaluation should include, at the least, medical, neurological, developmental, psychological, speech and language, hearing and vision evaluations and can typically be obtained from the nearest university medical center.

“The Diagnosis”

I believe the student should be told their diagnosis as soon as they are cognitively and emotionally capable of hearing it. They will need to be able to speak knowledgeably about it as an adult to self-advocate and to receive mandated services. An effort should be made to emphasize their strengths and to inform them of their weaknesses. And let them know, everyone has both.

“The Diagnosis”

- **Jed Baker, Ph.D. recommends discussing two or three strengths per every one weakness the student has when they learn about their diagnosis.**

Baker, J. (2005). Preparing for Life: The Complete Guide for Transitioning to Adulthood for those with Autism and Asperger’s Syndrome. Arlington, TX: Future Horizons.

DSM-5 & ASD

(Due out May, 2013)



- **Types of High Functioning Autism, Autism, Nonverbal LD, Asperger's Disorder, PDD, PDD, NOS:**

1. Autism Spectrum Disorder

Author (2010). Asperger's Disorder. Washington, DC: American Psychiatric Association;

www.dsm5.org/Proposed/Revisions/Pages/proposedrevision.apx?rid=97#.

Author (2010). Autistic Disorder. Washington, DC: American Psychiatric Association;

www.dsm5.org/Proposed/Revisions/Pages/proposedresisions.apsx?rid=94.

DSM-5 & ASD



“Because autism is defined by a common set of behaviors, it is best represented as a single diagnostic category that is adapted to the individual’s clinical presentation by inclusion of clinical specifiers (e.g., severity, verbal abilities and others) and associated features (e.g., known genetic disorders, epilepsy, intellectual disability and others.) A single spectrum disorder is a better reflection of the state of knowledge about pathology and clinical presentation; previously, the criteria were equivalent to trying to “cleave meatloaf at the joints.”

Author (2012). Autism Spectrum Disorder: DSM-5 Development. Washington, DC: American Psychiatric Association:

<http://www.dsm5.org/ProposedRevision/Pages/proposedrevision.aspx?rid=94#>

DSM-5 & ASD



- **The three domains of impairment will become two:**
 - 1) **Social/communication deficits**
 - 2) **Fixated interests and repetitive behaviors**

DSM-5 Severity of ASD

- **Level 3 (Requiring Very Substantial Support):** Very limited initiation and minimal response to others. Extremely difficult to refocus from fixed interests.
- **Level 2 (Requiring Substantial Support):** Limited initiation and limited response to others. Difficult to redirect from fixed Interests.
- **Level 1 (Requiring Support):** Without support has difficulty initiating and atypical response to others. Will resist efforts to redirect from special interests.

Author (January 26, 2011). Autism Spectrum Disorder, Severity. Washington, DC: American Psychiatric Association:

<http://www.dsm5.org/ProposedRevisions/Pages/proposedrevision.aspx?rid=94#>.

Social Communication Disorder

“Social Communication Disorder (SCD) is an impairment of pragmatics and is diagnosed based on difficulty in the social uses of verbal and nonverbal communication in naturalistic contexts, which affects the development of social relationships and discourse comprehension and cannot be explained by low abilities in the domains of word structure and grammar or general cognitive ability.”

Rule out ASD, “restricted, repetitive patterns of behavior, interests or activities as part of the autism spectrum.”

Author(December 9, 2010). Social Communication Disorder. Washington, DC: American Psychiatric Association:

<http://www.dsm5.org/ProposedRevision/Pages/proposedrevision.aspx?rid=489#>

International Classifications of Diseases- 11th Edition (ICD-11)

- Due to be published in 2015
- Is coordinating diagnostic terms with DSM-5.
- American Psychological Association (APA) is very involved with development of ICD-11 and the Functional Mental and Medical Health Companion to ICD-11.
- Psychologists will be strongly encouraged to use the ICD-11 by APA.

Clay, R. A. (July 2010). Defining disease worldwide.: The 11th revision of the International Classification of Diseases includes psychologists in key roles. Monitor On Psychology, 41 (7), 54.

Goodheart, C. (October 16, 2010). Psychology Practice: Preparing for Tomorrow. Paper Presented at the 2010 Annual Arizona Psychological Association Convention, Tucson, AZ.

Author (2012). The International Classification of Diseases 11th Revision is due by 2015. Geneva, Switzerland: World Health Organization:
<http://www.who.int/classifications/icd/revision/en/index.html>

Income Supports

- **Those with disabilities can receive financial support by two programs administered by The Social Security Administration:**
 - Supplemental Security Income (SSI)
 - Social Security Disability Insurance
 - www.ssa.gov/pgm/disability.htm

Supplemental Security Income

**“SSI benefits may be paid to persons who have a documented disability and who have little or no income. SSI provides cash to meet the basic needs of food, clothing and shelter.”
(p. 36)**

Baker, J. (2005). Preparing for Life: The Complete Guide for Transitioning to Adulthood for those with Autism and Asperger’s Syndrome. Arlington, TX: Future Horizons.

Social Security Disability Insurance

“SSDI is an income assistance program that provides cash payments to individuals who have a disability. To be eligible, a person must have worked and paid taxes for five years, or be the adult child of a person who has worked and paid taxes.” (p. 36)

Baker, J. (2005). Preparing for Life: The Complete Guide for Transitioning to Adulthood for those with Autism and Asperger’s Syndrome. Arlington, TX: Future Horizons.

Housing



- **Pacer Centers Housing Project:**
 - Helps young people understand their housing options
 - Helps parents and guardians consider children's housing options in high school
 - Information and referral, services and supports
 - State and Federal resources
 - www.pacer.org/housing/

Life Planning Timeline

- **Jed Baker, Ph.D. has a nice life planning guideline in his book on transitioning:
Baker, J. (2005). Preparing for Life: The Complete Guide for Transitioning to Adulthood for those with Autism and Asperger's Syndrome. Arlington, TX: Future Horizons, 30-32.**



Person-Centered Planning

This, “...is an umbrella term used to describe several approaches to developing goals for the future and identifying the supports and resources a disabled person may need to achieve his/her goals.” (p. 32)

Baker, J. (2005). Preparing for Life: The Complete Guide for Transitioning to Adulthood for those with Autism and Asperger’s Syndrome. Arlington, TX: Future Horizons.

Person-Centered Planning

- **Such plans:**
 - **Ensure the disabled individual is heard**
 - **Begin with how they want to live today and build upon that to plan for tomorrow**
 - **Take into account information from their family and friends about the person**
 - **And, investigate government, private, church, family and friends that can provide support.**

Baker, J. (2005). Preparing for Life: The Complete Guide for Transitioning to Adulthood for those with Autism and Asperger's Syndrome. Arlington, TX: Future Horizons.

Person-Centered Planning

- Places you can find person-centered planning programs:
 - Cornell University Person-Centered Planning Education Site:
www.ilr.cornell.edu/edi/pcp/courses.html.
 - The Learning Community for Person Centered Practices: www.elp.net
 - Allen, Shea, & Associates: www.allenshea.com
 - Capacity Works: www.capacityworks.com

Decision Making & Problem Solving

- Teaching children decision making skills should begin in preschool.

“Mary do you want milk, or orange juice?”

- By adolescence they should be taught how to use a decision and problem solving process to help them become independent.

Walker, E. (2010). Decision Making/Problem Solving Solutions with Teens (Fact Sheet). Columbus, OH: Family and Consumer Sciences, Ohio State University
Extension: form: HYG-5301-98-R10.

Teaching Decision Making & Problem Solving

- 1. Identify and define the problem**
 - a. Consider goals and optimum outcome**
- 2. Brainstorm all alternatives**
 - a. Encourage serious ideas**
 - b. Encourage silly ideas**
 - c. Write them down and don't be judgmental**



Teaching Decision Making & Problem Solving

3. Evaluate all options.

- a. Provide guidance and encouragement
- b. Ask them permission to point out concepts they may not have thought of. This empowers them and fosters independence.
- c. Help them determine if their decisions would infringe on the rights of others, is unkind, unfair, dishonest, etc. This is particularly important for ASD students with theory of mind issues.

4. Choose an option that does not hurt others.

5. Commit to a plan to implement the option.



Teaching Decision Making & Problem Solving



6. Evaluate the decision and its outcome
 - a. Ask what was learned by this experience and how it can help in the future.
 - b. Discuss how the decision was made.
 - c. Have them take ownership of the decision.
 - d. Don't brow beat them.
7. Give them a laminated page with the steps for decision making on it.

Walker, E. (2010). Decision Making/Problem Solving Solutions with Teens (Fact Sheet). Columbus, OH: Family and Consumer Sciences, Ohio State University Extension: form: HYG-5301-98-R10.

A Lifetime of Job Decisions

- **The average person in the U.S. has held 11 jobs in their lives between the ages of 18 and 44.**
- **It is important for the ASD student to learn career building skills and decision making because they will probably have many jobs in their lives. They will also probably need to be lifetime learners with regards to job skills.**

Bureau of Labor Statistics, U.S. Department of Labor (September 10, 2010). NUMBER OF JOBS HELD, LABOR MARKET ACTIVITY, AND EARNINGS GROWTH AMONG THE YOUNGEST BABY BOOMERS: RESULTS FROM A LONGITUDINAL SURVEY. Form: USDL-10-1243. From Website: <http://www.bls.gov/news.release/pdf/nlsoy.pdf>.

Motivation



“After years of social rejection, they want to be accepted for who they are rather than be told they need to change. How then could I motivate them to want to learn new social behaviors without suggesting that there was something problematic about their social functioning?” (p. 1)

Baker, J. (2005). Preparing for Life: The Complete Guide for Transitioning to Adulthood for those with Autism and Asperger’s Syndrome. Arlington, TX: Future Horizons.

Motivation



- **An individual can become so discouraged regarding their ability to get and keep a job they can begin to think a job is for other people not a loser like me.**
- **Parents of adult disabled children often become the “naggers” and the child becomes the “nagee” and this causes huge friction within a family.**

Ford, A. (2007). On Their Own: Creating an Independent Future for Your Adult Child with Learning Disabilities and ADHD. New York, NY: New Market.

Motivation



- Hiring a “professional nag” may be the solution; the “Life Coach”:
 - The, “...partnership between a client and a coach that helps the client move toward goals and take actions that will enable them to become the person they want to be in a more focused and rapid way than they would be able to do on their own.” (p. 167)

Ford, A. (2007). On Their Own: Creating an Independent Future for Your Adult Child with Learning Disabilities and ADHD. New York, NY: New Market.

Motivation



- **One way to motivate ASD students to learn social skills is to encourage them to learn social skills so they can teach others, perhaps to younger ASD students. To be able to teach something you must learn a lot about it, hence they will have to learn the social skills.**

Baker, J. (2005). Preparing for Life: The Complete Guide for Transitioning to Adulthood for those with Autism and Asperger's Syndrome. Arlington, TX: Future Horizons.

Motivation



- **Life coaches change negative self-talk that gets in the way of success.**
- **The life coach enters into a relationship where client accountability is paramount. “When clients agree to take action and move forward with a coach, they are more likely to actually follow through because they have to report back to the coach in their next session.” (p.170)**

Ford, A. (2007). On Their Own: Creating an Independent Future for Your Adult Child with Learning Disabilities and ADHD. New York, NY: New Market.

How to Find a Life Coach

- **International Coach Federation:**
www.coachfederation.org
 - **Suggestion: try to get one with at least a Masters degree in a mental health field.**
 - **DeAngelis, T. (2010). First-Class Coaching. Monitor On Psychology, 41 (10), 48:**
<http://www.apa.org/monitor/2010/11/life-coaches.aspx>

Independent Living

- **National Center on Independent Living:**
www.ncil.org/
 - “...NCIL was founded to embody the values of disability culture and Independent Living philosophy, which creates a new social paradigm and emphasizes that people with disabilities are the best experts on their own needs, that they have crucial and valuable perspective to contribute to society, and are deserving of equal opportunity to decide how to live, work, and take part in their communities”.

Author (No Date). Vision. Washington: DC: National Center on Independent Living.
From website: <http://www.ncil.org/about.html>.

Developmental Disabilities Act

- **The Developmental Disabilities Assistance and Bill of Rights Act of 2000**
- **PUBLIC LAW 106-402--October 30, 2000
114 STAT. 1677**

Developmental Disabilities

- **United States Department of Health and Human Services, Administration for Children and Families, Administration on Developmental Disabilities:**
www.acf.hhs.gov/programs/add/.
- **Mission Statement:** The Administration on Developmental Disabilities ensures that individuals with developmental disabilities and their families participate in the design of and have access to culturally-competent needed community services, individualized supports, and other forms of assistance that promote self-determination, independence, productivity, and integration and inclusion in all facets of community life.

Author (No Date). ADD Mission. Washington, DC: Administration on DD:
<http://www.acf.hhs.gov/programs/add/addaboutmission.html>.

One Stop Career Centers

- **Now Known as “CareerOneStop”, it is a partnership between the individual states and the U.S. Department of Labor that provides a whole menu of services, including career exploration and counseling, job training and listings, resume services, job interview training, and information on various careers Available at: www.careeronestop.org/.**

Vocational Rehabilitation

- **When you cannot do your job due to a disability you can receive services for free from your state's Vocational Rehabilitation Center.**
- **One works with a “VR Counselor” who helps you learn ways to work around your disability.**

Ford, A. (2007). On Their Own: Creating an Independent Future for Your Adult Child with Learning Disabilities and ADHD. New York, NY: New Market.

Vocational Rehabilitation

- **One needs documentation of having a disability written by a physician and/or mental health professional.**
- **The VR Counselor will interview the client to determine how they are doing in one of seven areas:**
 - **Getting to work, etc.**
 - **Listening and talking to others**
 - **Self-care**
 - **Work skills**



Vocational Rehabilitation

- Cooperating with others
- Making and carrying out plans
- Needed job accommodations



Ford, A. (2007). On Their Own: Creating an Independent Future for Your Adult Child with Learning Disabilities and ADHD. New York, NY: New Market.

Vocational Rehabilitation

- **The VR counselor will help the client create an “employment plan” which meets their needs, will lead to a job, and is complete.**
- **The VR counselor will determine if the client needs additional training and will help them get it.**
- **The VR counselor will give them advice on what the right job for them is given their interests, abilities, skills and disability/needs.**

Ford, A. (2007). On Their Own: Creating an Independent Future for Your Adult Child with Learning Disabilities and ADHD. New York, NY: New Market.

Volunteer Work



- **If all else fails consider volunteer work:**
 - It gets the disabled adult child “off the couch”
 - May help them to develop some self-esteem
 - May help them develop some job skills
 - May help them get a job eventually through their volunteerism.

Ford, A. (2007). On Their Own: Creating an Independent Future for Your Adult Child with Learning Disabilities and ADHD. New York, NY: New Market.

Career Counseling

- **Most community colleges offer extensive career counseling for young people, even those with disabilities:**
- **This would include:**
 - **An interview, an interest inventory, a career search, job shadowing and possible internships, volunteering, college majors and votech/trade schools training**
 - **What the person is not interested in is just as important as what they are interested in.**
 - **Also check out the National Career Development Association:**
http://associationdatabase.com/aws/NCDA/pt/sp/Home_Page

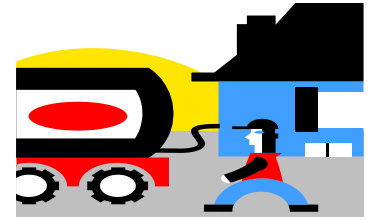
Skilled Trade Schools



“Trade schools can prepare you for a satisfying career that lets you use your hands to make a noticeable impact in the world. In fact, the skilled trades represent some of the smartest and most fulfilling job choices available today. If you enjoy building stuff, fixing problems, and doing work that is truly useful, then selecting a good trade school is one of the best ways to get closer to a life you can really be proud of.”

Author (No Date). Trade Schools, Colleges and Universities: Vocational and Skilled Trades. From website: <http://www.trade-schools.net/directory/trade-schools-directory.asp>.

Types of Jobs



- **Often working a job at a large company doing a monotonous task works better. Adults with disabilities often thrive with repetition and are adverse to change. When you work for a small employer you often must do more things on the job.**

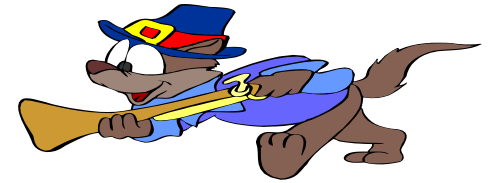
Ford, A. (2007). On Their Own: Creating an Independent Future for Your Adult Child with Learning Disabilities and ADHD. New York, NY: New Market.

Vocational & Skilled Trade Schools

- **Where to find Skilled Trade Schools:**
 - <http://www.trade-schools.net/directory/trade-schools-directory.asp>



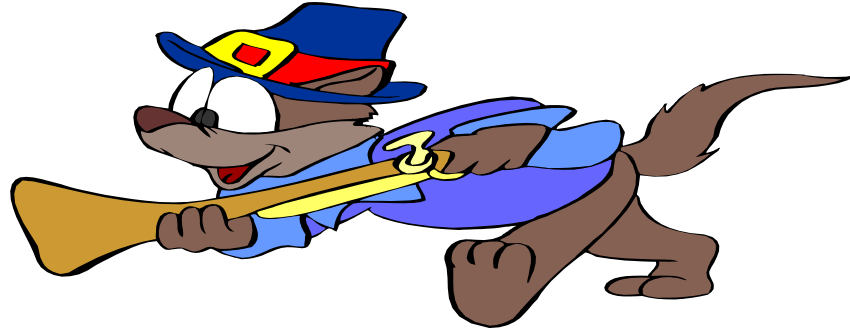
Job Hunting



- **Resume and cover letter: Use a resume service**
- **Interview: be on time, dress appropriately, bring a pen and paper, no gum, soda, smoking, etc., be polite and smile. Practice, practice, practice for the job interview! A career counselor can help with all of the above, too.**

Ford, A. (2007). On Their Own: Creating an Independent Future for Your Adult Child with Learning Disabilities and ADHD. New York, NY: New Market.

Job Hunting



- **Where to find a career counselor:**
 - **National Career Development Association:**
http://associationdatabase.com/aws/NCDA/pt/s/p/Home_Page

Work Portfolio

- **One can use their special Interests in getting a job (i.e., interest in video games = job creating video games, etc.).**
- **One can create a professional portfolio of examples of their special interests as part of their resume.**

Attwood, T. (2007). The Complete Guide to Asperger's Syndrome. Philadelphia, PA: Jessica Kingsley, p. 195.

Disclosing of One's Disability

- **This is an important life skill for anyone with a disability.**
- **It is also fraught with “landmines”.**
- **A person with a disability needs to learn how the law applies to this, how to inform a teacher, professor, and/or employer about their disability confidently and knowledgeably as well as when it is safe and not safe to disclose.**

Work Support for ASD

“Findings suggested that support throughout the first few weeks is crucial. However, there remains a need for flexibility with support as several clients went through periods of change at work or had other problems which meant they had a temporary need for a boost in their support hours.” (p. 367)

Nesbitt, S. (2000). Why and Why Not? Factors Influencing Employment for Individuals with Asperger’s Syndrome. Autism, 4(4), 357-369.

Work & ASD

Kevin T. Blake, Ph.D., P.L.C.
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Workplace Social Rules

“Where are the rules of the workplace written and how come it seems not everyone got the memo? The ‘memo’ it turns out, is something most people are born with – an intuitive sense that allows them to be naturally aware of social expectations and feeds them the information they need to follow the social code.” (p. vii)

Garcia Winner, M., and Crooke, P. (2011). Social Thinking At Work: Why Should I Care. San Jose, CA: Social Thinking.

Work Promotions

“In most companies, each promotion requires not only advanced knowledge or abilities, but a higher level of social and organizational skills as well.” (p. 127)

Garcia Winner, M., and Crooke, P. (2011). Social Thinking At Work: Why Should I Care. San Jose, CA: Social Thinking.

Tony Attwood on Successful “Aspie” Employment Outcomes

“Where there is a successful outcome, common themes include the discovery of a mentor within the person’s family circle of friends and colleagues, who is able to provide guidance and encouragement, as well as the individual’s personal qualities of determination and perseverance...”

Tony Attwood on Successful “Aspie” Employment Outcomes

**“...Other keys to a successful outcome are employment during adolescence in the form of a part-time job and recognition that there is no career that should be avoided by someone with an autism spectrum disorder.”
(p. 3)**

Attwood, T. (2012). Forward; In Grandin, T. (2012). Different...Not Less: Inspiring Stories of Achievement and Successful Employment From Adults with Autism, Asperger’s and ADHD. Arlington, TX: Future Horizons, p . 3-4.

Temple Grandin, Ph.D. Says:

“I am what I do.” (p. 5)

Grandin, T. (2012). Different...Not Less: Inspiring Stories of Achievement and Successful Employment From Adults with Autism, Asperger's and ADHD. Arlington, TX: Future Horizons.

“I sold my work, not myself.” (p. 6)

Grandin, T. (2012). Different...Not Less: Inspiring Stories of Achievement and Successful Employment From Adults with Autism, Asperger's and ADHD. Arlington, TX: Future Horizons

Temple Grandin On Her Employment History

“I always found opportunities for work by locating the ‘back door.’ I never landed a job by filling out a job application or doing a formal interview. I got my freelance business started by showing potential clients a portfolio of my work.” (p. 381)

Grandin, T. (2012). Different...Not Less: Inspiring Stories of Achievement and Successful Employment From Adults with Autism, Asperger’s and ADHD. Arlington, TX: Future Horizons

Temple Grandin Believes

- **Teens on the spectrum need a job.**
- **Those on the spectrum need to learn how to do work that is assigned by others.**
- **Those on the spectrum must learn to complete work in a timely fashion in a way the employer expects it.**

Grandin, T. (2012). Different...Not Less: Inspiring Stories of Achievement and Successful Employment From Adults with Autism, Asperger's and ADHD. Arlington, TX: Future Horizons.

Temple Grandin's Employment Insights

- **Develop connections and a portfolio**
- **Find mentors**
- **Know what your potential employer wants**
- **Do one project at a time**
- **Find a career niche that fits abilities & skills**
- **Don't fixate on being on the spectrum**
- **Find a business manager**
- **People on the spectrum continue to grow throughout life**

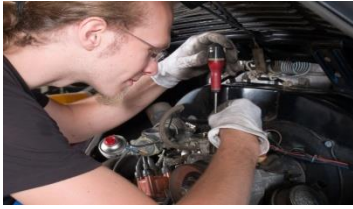
Grandin, T. (2012). Different...Not Less: Inspiring Stories of Achievement and Successful Employment From Adults with Autism, Asperger's and ADHD. Arlington, TX: Future Horizons.



Work & ASD

“Many of us are workaholics. Many working AS adults report that we ‘have no life’ outside work. When we say this to others, our statements appear to be exaggerations...We know differently.” (p. 12)

Myer, R.N. (2001). Asperger Syndrome Employment Handbook. Philadelphia, PA: Jessica Kingsley.



Work & ASD

“You feel so exhausted daily just from ‘hanging on’ or controlling yourself that you feel drained, virtually unable to function. You need a full recharge of your batteries just to face the next day. *Result: You don’t have time for family, intimate relationships, friendship and otherwise diverse interests to balance your life outside of work. You realize you are working just to work.*”
(p. 13)

Myer, R.N. (2001). Asperger Syndrome Employment Handbook. Philadelphia, PA: Jessica Kingsley.

Work & ASD



**“As young persons, many of us didn’t learn that play has an intrinsic value in our lives”
(p. 12).**

Myer, R.N. (2001). Asperger Syndrome Employment Handbook. Philadelphia, PA: Jessica Kingsley.



Work & ASD

“Like other non-AS working adults, we accept the fact that work is often unpleasant. We bitch and moan about it just like NT (neurotypical) folks. There’s one important difference: Somehow, they manage to break free of their ruminations and get on with their lives.” (p. 12)

Myer, R.N. (2001). Asperger Syndrome Employment Handbook. Philadelphia, PA: Jessica Kingsley.

Work and ASD



- **Beware of the “Cassandra Syndrome”...Those at work not believing the professional documentation of your disability.**

Myer, R.N. (2001). Asperger Syndrome Employment Handbook. Philadelphia, PA: Jessica Kingsley.



Work and ASD

“Many employment counselors are not comfortable with the idea that persons with disabilities are entitled to equal consideration for competitive employment (real, market-rate work). Some of us may not be ready for that kind of work either, but ultimately that is our decision to make, not theirs.” (p. 39)

Myer, R.N. (2001). Asperger Syndrome Employment Handbook. Philadelphia, PA: Jessica Kingsley.



Work & ASD

- **“Buying Help”** regarding when and how to disclose and other work issues:
 - Professional Counselor, Employment Specialist, Job Coach, Job Developer, Vocational Rehabilitation Counselor
 - Voc Rehab has funds for training
 - Get training in how and when to disclose and other work related issues.

Myer, R.N. (2001). Asperger Syndrome Employment Handbook. Philadelphia, PA: Jessica Kingsley.



Work & ASD

- **“Buying Help”**: High school students over 16 can “buy help” through the federal school transition program due to the special education laws. Voc Rehab is mandated to be part of your transition team.
- **“A transition plan is geared towards assuring your success as an independent adult.” (p. 50)**

Myer, R.N. (2001). Asperger Syndrome Employment Handbook. Philadelphia, PA: Jessica Kingsley.

Work & ASD



- **“Horse Trade”** skills and talents for accommodations not typically given to other employees.
- **Go for the lowest tech accommodation**
- **Help employer lower their liability exposure and increase your productivity.**

Myer, R.N. (2001). Asperger Syndrome Employment Handbook. Philadelphia, PA: Jessica Kingsley.

Dr. Temple Grandin



- **Six things needed for a successful career transition:**
 1. **Gradual transition from school to work**
 2. **Work with supportive employers and teachers**
 3. **Mentors**
 4. **Educate employers and employees (your strengths and weaknesses)**
 5. **Freelance**
 6. **Make a skills portfolio**

**Grandin, T. (1996). Making the Transition from the World of School into the World of Work. Bloomington, IN: University of Indiana Resource Center for Autism. From Website:
<http://www.iidc.indiana.edu/index.php?pageId=599>**

Healthy Sexual Development



Henault & Attwood ASD Sexuality Study

- **Derogatis Sexual Function Inventory**
- **19 males, 9 females; Mean age 32, range 18 to 64; 21 Asperger's Disorder; 5 HFA; 2 PDD: Average IQ**
- **“Although all developed an interest in sexuality around age 14, 11 of the 28 participants were still virgins.”**
- **For those who had intercourse the mean age for their first experience was 22.**

Henault, I. (2005). Asperger's Syndrome and Sexuality: From Adolescence through Adulthood. Philadelphia, PA: Jessica Kingsley.

Sexuality & ASD

**“By then he had learnt a way to escape his uneasiness of lack of communication. It was masturbating on the edge of the bed or sofa.”
(Rajarshi (Tito) Mukhopadhyay)**

Mukhopadhyay , T. R. (2011). The Mind Tree: A Miraculous Child Breaks the Silence of Autism. New York, NY: Arcade.

ASD, Sexuality and Suicide

“The desire for a girlfriend, which goes along with sex drive was so important to this young man that his failure made him consider whether life was worth living.” (p. 13)

Newport, J., and Newport, M. (2002). Autism-Asperger's & Sexuality: Puberty and Beyond. Arlington, TX: Future Horizons.

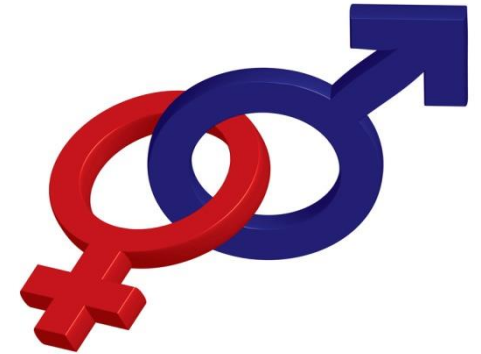
“The Talk”



- **Watch for signs of interest in sex: signs of masturbation (usually begins in middle school); “the hidden Playboy”; “forbidden” websites, etc.**
- **Most public schools begin introducing sex education late in fifth grade and it is mostly plumbing and how to not catch STDs.**

Newport, J., and Newport, M. (2002). Autism-Asperger’s & Sexuality: Puberty and Beyond. Arlington, TX: Future Horizons.

“The Talk”



- It is better to have the talk, “too early” than “too late.”
- Make sure you have it with you daughter prior to her first period.

Newport, J., and Newport, M. (2002). Autism-Asperger’s & Sexuality: Puberty and Beyond. Arlington, TX: Future Horizons.

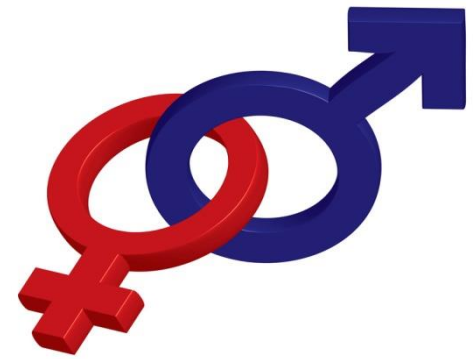
“The Talk”



- Use the signs of interests in sex as an entre to discussing sexuality.
- Find a good time and place for the discussion.
- Begin by asking them what they know.
- Tell them its OK to know these things, that sexuality is not “dirty” and correct their misinformation and/or interpretations in a kind way.
- Discuss you family’s values/ethics/morals related to sexuality.
- Go through age appropriate sex ed literature with your child.

Newport, J., and Newport, M. (2002). Autism-Asperger’s & Sexuality: Puberty and Beyond. Arlington, TX: Future Horizons.

“The Talk”



- **What to discuss during the talk:**
 - **Human anatomy with a diagram, discuss where it is appropriate to talk about sex, birth control, STDs and prevention, hygiene, responsibility, respecting wishes of partners, being left out, not using sex as a tool, “the talk” is not a one shot affair it is a process, warn them about “locker room bragging”, etc.**

Newport, J., and Newport, M. (2002). Autism-Asperger’s & Sexuality: Puberty and Beyond. Arlington, TX: Future Horizons.

Dating & ASD



- **Parents must help their ASD children what most learn on their own.**
 - **Social gestures, Appropriate social risk taking, How to choose appropriate dates, What is an appropriate social activity, etc.**
- **If your ASD daughter has a boyfriend watch for exploitation.**

Newport, J., and Newport, M. (2002). Autism-Asperger's & Sexuality: Puberty and Beyond. Arlington, TX: Future Horizons.

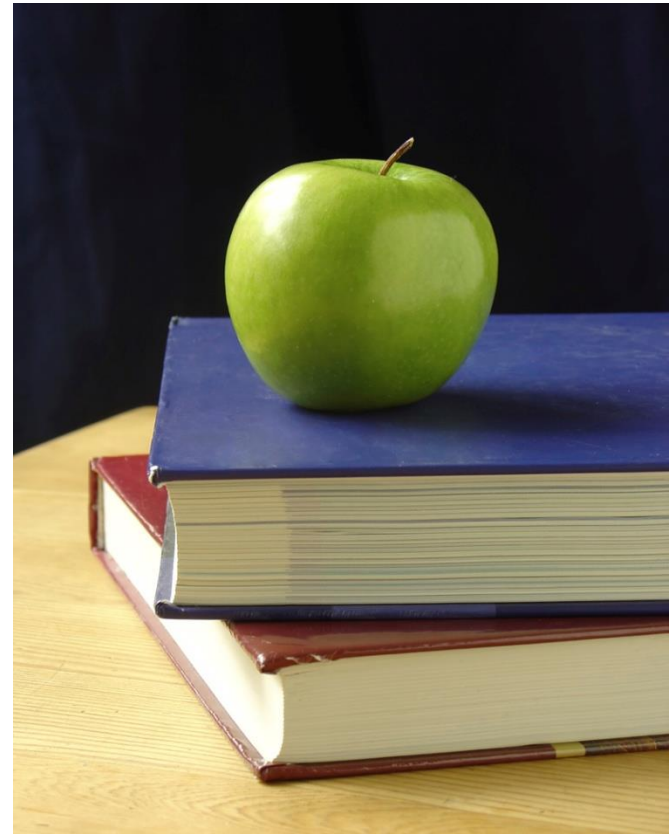
ASD and Pornography

“The interest becomes unacceptable when the adolescent or adult with Asperger’s syndrome considers that (pornographic, sic.) photographs are a realistic representation of typical people and sexual activities on a first date. Fortunately we now have programs specifically to inform adolescents and adults with Asperger’s syndrome about appropriate levels of intimacy and sexuality.” (p. 193)

Attwood, T. (2007). The Complete Guide to Asperger’s Syndrome. Philadelphia, PA: Jessica Kingsley.

Excellent Book On Sexuality and ASD

**Henault, I. (2005).
Asperger's
Syndrome and
Sexuality: From
Adolescence
through Adulthood.
Philadelphia, PA:
Jessica Kingsley.**



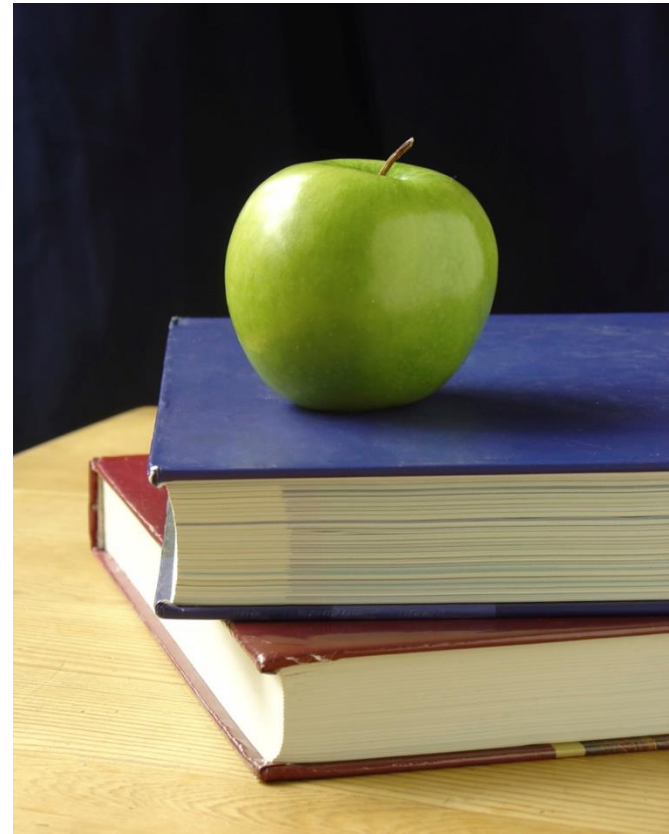
Henault's Programme for the Development of Sociosexual Skills

1. Assessment & Introduction
2. Intro to Sexuality & Communication
3. Sexual Relations & Behaviors
4. Physiology of Sex
5. Sexual Relations & Behaviors
6. Emotions
7. Birth Control & STDs
8. Sexual Orientation
9. Drugs
10. Abuse & Inappropriate Sexual Behavior
11. Sexism & Violence
12. Theory of Mind, Emotions & Intimacy

Henault, I. (2005). Asperger's Syndrome and Sexuality: From Adolescence through Adulthood. Philadelphia, PA: Jessica Kingsley.

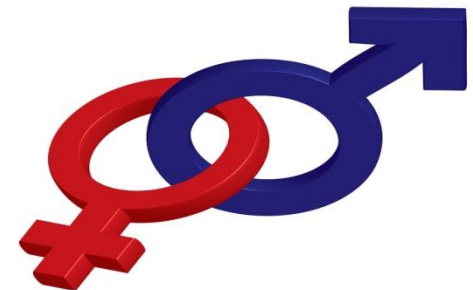
Excellent Book on Sexuality & ASD

**Newport, J., and
Newport, M. (2002).
Autism-Asperger's &
Sexuality: Puberty
and Beyond.
Arlington, TX: Future
Horizons.**



Sexuality and Disability: A Guide for Parents

- **Author (2009). Sexuality and Disability: A Guide for Parents. Alberta, British Columbia, Canada: Alberta Health Services, Sexual and Reproductive Health Education and Health Promotion, p. 1-21.**
 - www.teachingsexualhealth.ca/media/pdf/Sexuality_Developmental_Disability.pdf



The “Resting Face”



- **75% of the population has an emotionally neutral face.**
- **25% of the population have a resting face that is interpreted negatively.**
- **The older you are the more at risk you are for this.**
- **This can cause a very negative first impression.**
- **Some people resort to surgery to “correct” this (Bell’s Palsy, etc.).**

Nowicki, S. and Duke, M. (2002). Will I Ever Fit In? New York, NY: Free Press.

Golden Ratio

**“...We found that although different faces have varying attractiveness, individual attractiveness is optimized when the face’s vertical distance between the eyes and mouth is approximately 36% of its length and the horizontal distance between the eyes is approximately 46% of the face’s width...”
(p. 149)**

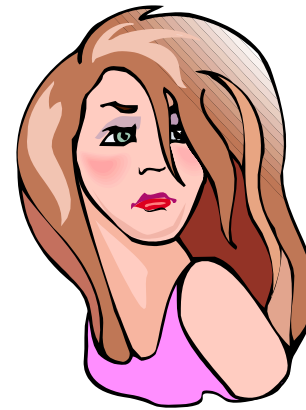
Pallett, P.M., Link, S., and Lee, K. (January 2010). New “Golden Ratios for Beauty. Vision Research, 50 (2), pp. 149-154.

Facial Symmetry and “Beauty”

“Two prominently studied traits are symmetry and sexual dimorphism, which, for many animals, are proposed cues to heritable fitness benefits. These traits are associated with other potential benefits, such as fertility. In humans, the face has been extensively studied in terms of attractiveness. Faces have the potential to be advertisements of mate quality and both symmetry and sexual dimorphism have been linked to the attractiveness of human face shape.”

Little, A., Jones, B.C., Waite, C., Tiddeman, B.P., Fienberg, D.R., Perrett, D.I., Apicella, C.L., and Marlowe, F.W. (July 9, 2008). Symmetry Is Related to Sexual Dimorphism in Faces: Data Across Culture and Species, PLoS One,3 (5): e2106.

Flirting and Social Abilities



- "...a flirting plan is wired into us, and that it has been embedded in our genes and in our brain's operating system the same way and for the same reasons that every other sexual trait has been - by trial and error, with conservation of what works best." (Rodgers, 1999, p. 38)

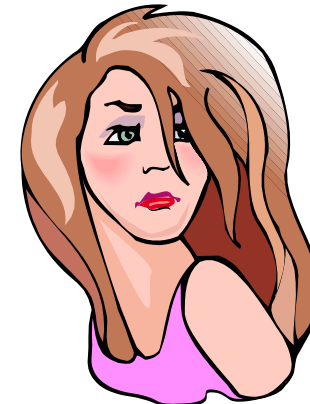
Rodgers, J.E. (February, 1999). Fascinating Flirting. Psychology Today, 32 (1), 36-41, 64-65, 67, 69-70

Flirting and Social Abilities



- **“Enter creativity, humor and intelligence. Deployed in flirting they disclose more about an individual person than all the antlers do about leaching animals...They act as an honest signal that we’ve got a reasonably well put together nervous system.” (p. 70)**

Rodgers, J.E. (February, 1999). Fascinating Flirting. Psychology Today, 32 (1), 36-41, 64-65, 67, 69-70.

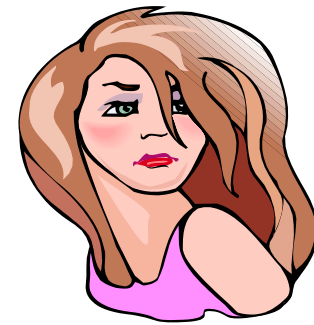


Flirting and Social Abilities

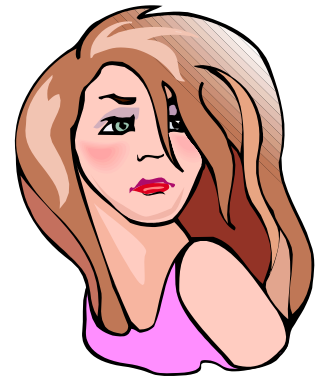


- **“The moment of attraction, in fact, mimics a kind of brain damage...In attraction, we don’t stop and think, we react, operating on a ‘gut’ feeling, with butterflies, giddiness, sweaty palms and flushed faces brought on by the reactivity of the emotional brain. We suspend intellect at least long enough to propel us to the next step in the mating game-flirtation.” (p.5)**

Ellison-Rogers, J. (January/February, 1999). Flirtation Fascination. Psychology Today, (Document ID: 575),
From website: www.psychologytoday.com/articles/index.php?term+pto19990101-000033&print=1 .



Flirting and Social Abilities



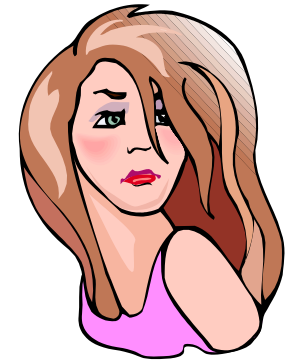
- **It takes about seven seconds to form a first opinion about another person. Most of this is done non-verbally.**

Nowicki, S. and Duke, M. (2002). Will I Ever Fit In? New York, NY: Free Press.

- **Mating and relationships would be almost impossible without facial expressions.**

Gladwell, M. (August 5, 2002). The Naked Face (Interview of Paul Ekman). The New Yorker, pp. 36-49.

Flirting and Social Abilities



- **Attwood's (1998) story of the man with Asperger's Disorder in a singles bar.**
- **Cordoni stated you need the same behaviors to get a job as you need to get a date.**

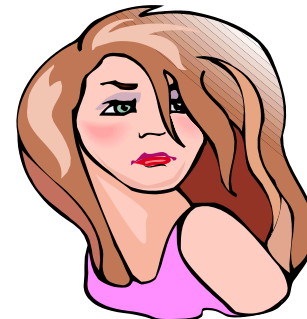
Attwood, T. (1998). Asperger's Syndrome: A Guide for Parents and Professionals. Philadelphia, PA: Jessica Kingsley.

Cordoni, B. (1987). Living With A Learning Disability. Carbondale, IL: Southern Illinois University Press.

Flirting and Social Abilities

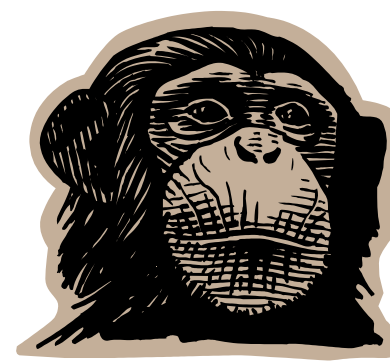


“Over the course of our evolution as a species, our brains have learned how to spot the healthiest mates, those who are likely to give us children, and those whose resources and commitment can help our offspring survive.” (p. 60)



Brizendine, L. (2006). The Female Brain. New York, NY: Morgan Road.

Chimps and Polio

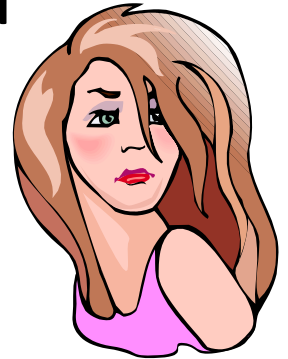


“Finally, there are the rarely observed instances of shunning a group member whose behavior seems abnormal – the social rejection of Pepe and Old Mr. McGregor after they suffered polio.” (P. 227)

Goodall, J. (1986). Social Rejection, Exclusion and Shunning Among Gombe Chimpanzees. *Ethnology and Sociobiology*, *7*, pp. 227-239. From Website: <http://www.bepress.com/context/gruterclassics/article/1032/viewcontent/>.

How to Treat Flirting Difficulties

- Social Skills training by Mental Health Professionals and Speech-Language Pathologists
- Treat Neurosocial Comorbidities & lack of muscle tone
- Try an “Emotional Seeing Eye Dog” (Grandin, 1995)
- Address age appropriate dress and grooming.
- Take care of complexion, etc.
- SIRC Guide to Flirting



Grandin, T. (1995). Thinking in Pictures: And Other Reports From My Life with Autism. New York, NY: Vintage.

Grandin, T. (2006). Animals in Translation. New York, NY: Simon and Schuster.

Newport, J., and Newport, M. (2002). Autism-Asperger's & Sexuality: Puberty and Beyond. Arlington, TX: Future Horizons.

Social Issues Research Centre (No date). SIRC Guide to Flirting, pages 1 to 16. www.sirc.org/publik/flirt.html.



Nice Description of Human Flirting

Brooks, D. (January 11, 2011). Social Animal: How The New Sciences of Human Nature Can Help Make Sense of a Life. New Yorker.

- http://newyorker.com/reporting/2011/01/17/110117fa_fact_brooks?printable=true.

Social Issues Research Centre (SIRC)

Guide to Flirting

“Flirting is a basic instinct, part of human nature. This is not surprising: if we did not initiate contact and express interest in members of the opposite sex, we would not progress to reproduction and the human species would become extinct. According to some evolutionary psychologists, flirting may even be the foundation of civilization as we know it. They argue that the large human brain – our superior intelligence, complex language, everything that distinguishes us from animals – is the equivalent to a peacock’s tail: a courtship device evolved to attract and retain sexual partners. Our achievements in everything from art to rocket science may be merely a side-effect of the essential ability to charm.”
(Page 1 of 16)

Human Flirting Behavior

- **55% of first impressions come through appearance and body language.**
- **38% comes from your style of speaking, not the content of what you say.**
- **7% comes from the words you say**

Social Issues Research Centre (No date). SIRC Guide to Flirting,
<http://www.sirc.org/publik/flirt.html>,
pages 1 to 16.



WHAT DOES THIS MEAN?



- **Work on appearance and body language first**
 - Age appropriate and stylish clothing and hair
 - Good hygiene and grooming
 - Cleaning up complexion (dermatologist, etc.)
 - Work on muscle tone (OT/PT/Personal Trainer, etc.)
 - Work on Body Language (Mental Health Professional and Speech-Language Pathologist)

Digression: ASD and Appearance



- **Those with Asperger's Disorder and High Functioning Autism have problems with Theory of Mind which can cause problems with receptive interpretation of non-verbal cues from others. It can also cause them problems in putting importance on their own non-verbal cues.**

Klin, A., Volkmar, F.R. and Sparrow, S.S. (2000). Asperger Syndrome. New York, NY: Guilford.

WHAT DOES THIS MEAN? (CONT.)

- **Work on speech second (Speech-Language Pathologist):**
“Aim for moderation in volume and tone, with enough variation in pitch and pace to hold your companion's interest. Also remember that a rising or falling intonation, especially when accompanied by a drop in volume, is a 'turn-yielding cue', whereby speakers signal that they have finished what they are saying and are ready to listen to the other person. When you hear these vocal signals, your companion is probably indicating that it is your turn to speak. When your companion hears these signals, he or she may well assume that you are 'yielding' the floor.”

Social Issues Research Centre (No date). SIRC Guide to Flirting,
<http://www.sirc.org/publik/flirt.html>,
pages 1 to 16.

WHAT DOES THIS MEAN? (CONT.)

- **Work on conversational content third (Speech-Language Pathologist and Parent) (**Practice, Practice, Practice!**):**
“The 'art' of verbal flirting is really just a matter of knowing the rules of conversation, the unwritten laws of etiquette governing talking and listening. The best and most enjoyable conversations may seem entirely spontaneous, but the people involved are still obeying rules. The difference is that they are following the rules automatically, without consciously trying, just as skilled, experienced drivers do not have to think about changing gears. But understanding how the rules of conversation work – like learning how and when to change gears – will help you to converse more fluently, and flirt more successfully.”

Social Issues Research Centre (No date). SIRC Guide to Flirting,
<http://www.sirc.org/publik/flirt.html>,
pages 1 to 16.

Social Issues Research Centre (SIRC) Guide to Flirting (Continued)

Social Issues Research Centre (No date). SIRC
Guide to Flirting,
<http://www.sirc.org/publik/flirt.html>,
pages 1 to 16.

This offers an excellent scientific (& lay person friendly) description of human flirting behavior and can be used as a teaching tool.

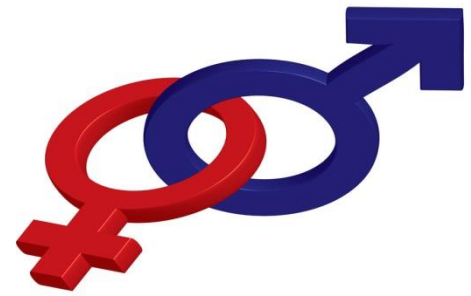
What is a Date?



“Going out with someone in an identified setting such as a restaurant, cinema, or cultural event with the intent of getting to know them better to see if you would be interested in developing a romantic relationship.” (p. 253)

Baker, J. (2005). Preparing for Life: The Complete Guide for Transitioning to Adulthood for those with Autism and Asperger’s Syndrome. Arlington, TX: Future Horizons.

Immaturity

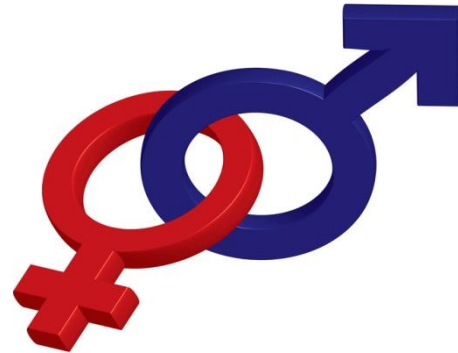


Anne Ford wrote, “The most successful dates or boyfriend-girlfriend relationships I have seen in the LD community are between two adults with similar levels of disability who act more like best friends than lovers...When you find someone like that, other quirks and oddities of behavior don’t matter that much.” (p. 64-65)

Ford, A. (2007). On Their Own: Creating an Independent Future for Your Adult Child with Learning Disabilities and ADHD. New York, NY: New Market.

Where to Find a Date

- School & school social clubs
- Youth groups
- Places of worship and specialized clubs/groups sponsored by them
- Job training center
- Friends and family
- Internet
- Singles events
- Gym, library, dance clubs, parties, etc.



Baker, J. (2005). Preparing for Life: The Complete Guide for Transitioning to Adulthood for those with Autism and Asperger's Syndrome. Arlington, TX: Future Horizons.

Rules for Internet Dating



- **Do not give out your home address or phone number.**
- **Always meet for the first time in a public place far from home (i.e., restaurant, coffee shop, etc.).**
- **Realize everything said on the internet is not true.**
- **Use a reputable internet dating service for added security.**

Ford, A. (2007). On Their Own: Creating an Independent Future for Your Adult Child with Learning Disabilities and ADHD. New York, NY: New Market.

ASD and Sexual Harassment

“We do recognize that problems with sexual expression and experiences can lead to a person with Asperger’s syndrome being charged with a sexual offence. The charge tends to be for sexually inappropriate behaviour rather than sexually abusive or sexually violent behaviour...The person may have difficulty distinguishing between kindness and attraction, and assume a friendly act was an indication of romantic or sexual attraction.” (p. 339)

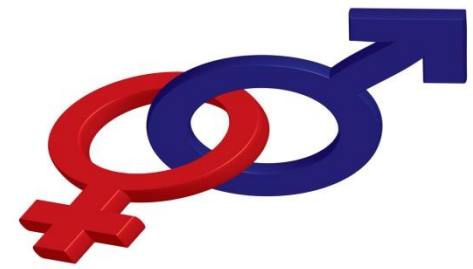
Attwood, T. (2007). The Complete Guide to Asperger’s Syndrome. Philadelphia, PA: Jessica Kingsley, p. 130.

Charli: An Adult on the Spectrum

“...I often engaged in activity that today would be called ‘stalking.’ While I truly intended no harm, I experienced unbearable loneliness and if some handsome young man appeared on the periphery of my solitary life, my better judgment deserted me.” (p. 38)

Grandin, T. (2012). Different...Not Less: Inspiring Stories of Achievement and Successful Employment From Adults with Autism, Asperger’s and ADHD. Arlington, TX: Future Horizons.

Sexuality and ASD



- Kids with an “invisible disability” and an aid in a mainstream class are often seen as weird and shunned.
- The more the child is seen around the school without the aid the better.
- More restrictive environment can be a dumping ground: Conduct Disorder & Victim
- Without intensive social skills training in childhood the child will not be prepared for puberty.

Newport, J., and Newport, M. (2002). Autism-Asperger’s & Sexuality: Puberty and Beyond. Arlington, TX: Future Horizons.

Sexuality and ASD



- Have your kid assigned a “**social helper student**”:
 - The child with excellent social skills in your class, who is a “good citizen” and good student.
 - Train the helper student in how to be a helper student.

Thompson, S. (1996). Neurobehavioral Characteristics Seen in the Classroom: Developing an Educational Plan for the Student with NLD.
From NLD on the Web: www.nldontheweb.org/thompson-5.htm .

Sexuality and ASD

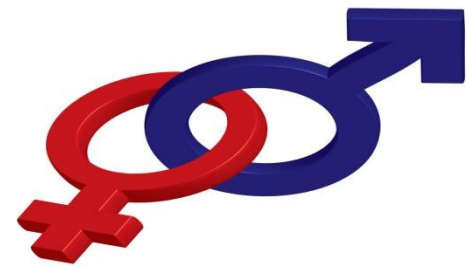


“An associate is someone who helps you perform an activity. This is someone you can trust long enough to complete that activity...Many autistic adults who find partners report those partners entered their life as trusted associates, people who could be relied on to share necessary or even enjoyable activities. “(p. 26-27)

- **The person with ASD should be taught that just because someone is a trusted associate does not make them a potential date!**

Newport, J., and Newport, M. (2002). Autism-Asperger’s & Sexuality: Puberty and Beyond. Arlington, TX: Future Horizons.

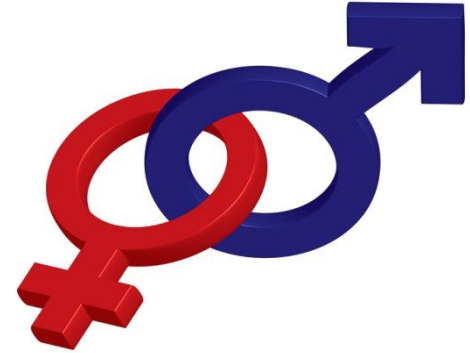
Sexuality and ASD



- **Often the ASD child and adolescent does not have any friends, however, forcing them to interact socially may cause more harm than good.**
- **Get them involved in after school activities, clubs etc. they might be interested in and they will find others interested in the same things.**
- **Encouraging them when they start to show interest in someone.**

Newport, J., and Newport, M. (2002). Autism-Asperger's & Sexuality: Puberty and Beyond. Arlington, TX: Future Horizons.

ASD and Sexuality



- **Sports, PE (adaptive/or not), aerobic exercise, working with a fitness instructor etc. can help with appearance, confidence and fitness if done in a way that meets the child's/teen's needs.**

Newport, J., and Newport, M. (2002). Autism-Asperger's & Sexuality: Puberty and Beyond. Arlington, TX: Future Horizons.

Examples of “The Rules”



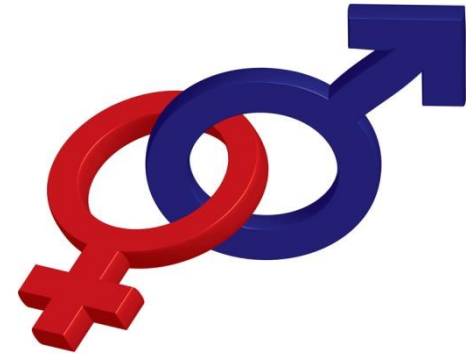
- **If someone says “no” to going on a date with you three times (with more than one week between invitations) the person is ‘saying nicely’, “no I do not want to go out with you.” Don’t ask them again.**
- **Don’t expect physical contact on the first several dates. Maybe hold hands on second date, kiss at door good night.**
- **Don’t ask him in on the first several dates.**

Ask Questions



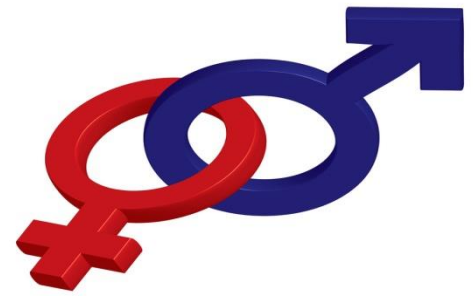
- **“Be friendly and engaging” - Ask open ended questions about them (teach this)**
- **Teach them how to respond to questions about themselves. Short, truthful, etc.**
- **Remember the best pick up line is, “Hi my name is...”**

Be Mannerly



- Use proper table educate.
- Don't eat too fast or too slow.
- Choose activities and food your date and you would probably like.
- Avoid your “special topic”. Try to show interest in their special topic.
- The pace for all this is **SLOW!!!**

Touching



- The first touch should be on the forearm/back of shoulder (typically non-threatening).
- If not rejected later touch hand.
- Later hold hand...
- If they say, “NO” then NO means NO!

**Social Issues Research Centre (No date). SIRC
Guide to Flirting,
<http://www.sirc.org/publik/flirt.html>,
pages 1 to 16.**

Celibacy



“I have remained celibate because doing so helps me to avoid the many complicated social situations that are too difficult to handle. For most people with autism, physical closeness is as much a problem as not understanding social behavior.” (Dr. Temple Grandin, p. 133)

Grandin, T. (1995). Thinking In Pictures: And Other Reports From My Life With Autism. New York, NY: Vintage.

Anita Lesko: Adult on the Spectrum

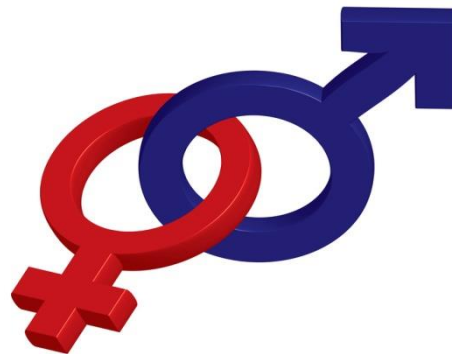
- **Registered nurse anesthetist & aviation photojournalist**

“I haven’t been on a date for 14 years. I realize this is shocking to most people, but it just happened this way because of all the things I’ve been doing with my time. I didn’t make a conscious decision not to date – it just happened.” (p. 201)

Grandin, T. (2012). Different...Not Less: Inspiring Stories of Achievement and Successful Employment From Adults with Autism, Asperger’s and ADHD. Arlington, TX: Future Horizons.

Sex Therapists and Educators

- **American Association of Sexuality Educators and Therapists: www.aasect.org**
 - There are professionals in this organization that work with those with disabilities.



Dr. Blake & Cross Country Education

www.crosscountryeducation.com

- ❖ Other Seminars Dr. Blake does for Cross Country Education (6 CEUS, CDs available):
 - **Social Difficulties of Learning, Attentional and Autism Spectrum Disorders: Screening and Treatment**
 - **Neurosocial Disorders: Creating a Comprehensive Treatment Plan**
 - **Assessment and Treatment of Dyslexia in Adolescents and Adults: No Adult Left Behind**

Dr. Blake & Cross Country Education

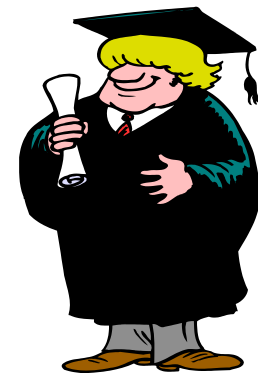
www.crosscountryeducation.com

❖ Webinars Dr. Blake does for Cross Country Education (1 CEU available):

- **Understanding Inattentive ADHD: Evidence-Based Screening and Treatment Strategies (Recently Updated!)**
- **Everyone is a Stranger: Face Blindness in Children with Autism Spectrum Disorders**
- **“No! I Don’t Want to Give My Child a Drug to Treat Their ADHD”: Complementary and Alternative Treatments for ADHD**

Kevin T. Blake, Ph.D., P.L.C.

- ***Dr. Blake's personal story seminar:***
 - **I Pulled an All-Nighter for My High School Graduation and Other Adventures of a Dyslexic, Hearing Impaired Psychologist**
- ***Secondary & Post Secondary Education and Employer Consultation***
- ***Program Development***
- ***Staff Training & Conference Presentations-Learning Disorders, Dyslexia, AD/HD, Autism Spectrum Disorders; Children, Adolescents & Adults***
 - **520-327-7002**
 - **www.drkevintblake.com**



Resources: Organizations/Websites



Helpful Organizations/Websites

- **MAAP Services for Autism and Asperger's Disorder:** www.maapservices.org
- **Oasis at the MAAP website on Asperger's Disorder:** www.aspergersyndrome.org/
- **Autism Research Institute:** www.autism.com
- **UC Davis M.I.N.D. Institute:** www.ucdmc.ucdavis.edu/MINDInstitute

Helpful Organizations/Websites

- Yale Child Study Center:
www.med.yale.edu/chldstdy/autism/aspergers.html
- Autism Research Centre (Great Britton, Simon Baron-Cohen): www.autismresearchcentre.com
- Tony Attwood (Australiian Asperger's Disorder expert): www.tonyattwood.com.au/
- Temple Grandin, Ph.D. (Famous autistic professor and animal behavior expert): www.templegrandin.com/

Helpful Organizations/Websites

- **Autism Society:** www.autism-society.org
- **Autism Speaks:** www.autismspeaks.org
- **National Autism Association:**
www.nationalautism.org
- **National Autism Center:**
www.nationalautismcenter.org
- **Organization for Autism Research:**
www.autismresearch.org

Helpful Organizations/Websites

- U.S. Autism and Asperger Association:
www.usautism.org
- The Gray Center: www.thegraycenter.org/
- Future Horizons (Publisher):
<http://www.fhautism.com/>
- NLD on the Web: www.nldontheweb.org
- Byron Rourke's Website: www.nld-bproure.ca
- Nonverbal Learning Disabilities Association (NLDA): www.nlda@nlda.org

Nonverbal Autism

- **Soma Mukhopadhyay: HALO (Helping Autism through Learning and Outreach) and Rapid Prompting Method:**

www.halo-soma.org/

- **60 Minutes Video of Tito Mukhopadhyay:**

www.youtube.com/watch?v=YRhaevfLDOY

Autism Service Dogs

❖ 4 Paws For Ability:

<http://www.4pawsforability.org/autismdogs.html>

❖ Autism Service Dogs of America:

<http://www.autismservicedogsofamerica.com/>

Hyperlexia

➤ **Canadian Hyperlexia Association:**
<http://judyanddavid.com/cha/>

William's Syndrome

- **William's Syndrome Association:**
www.william-syndrome.org
- **William's Syndrome Foundation:**
<http://www.wsf.org/>
- **William's Syndrome National Institutes of Health:**
<http://www.ninds.nih.gov/disorders/williams/williams.htm>

Hearing/Deafness/CAPD/Hyperacusis

- **National Institute on Deafness and Other Communication Disorders:**
<http://www.nidcdinfo@nidcd.nih.gov>
- **American Speech-Language Hearing Association:**
www.professional.asha.org
- **American Academy of Audiology:**
www.audiology.org
- **American Academy of Otolaryngology-Head and Neck Surgery (AAO-HNS):** www.entnet.org

Hearing/Deafness/CAPD/Hyperacusis

- **National Coalition for Auditory Processing Disorders:** <http://www.nacpd.org>
- **The Hyperacusis Network:** <http://www.dmalcore@mail.wisc.net>

Hearing/Deafness/CAPD/Hyperacusis

- **National Institute of Neurological Disorders and Stroke:**
www.ninds.nih.gov/disorders/prosopagnosia/Prosopagnosia.htm
- **Propagnosia Research Centers at Harvard and University College London:** www.faceblind.org
- **Face Blind!:** www.choiser.com/faceblind/

Synesthesia

- **American Synesthesia Association:**
<http://synesthesia.info/index.html>
- **UK Synaesthesia Association:** www.uksynaesthesia.com/
- **Synesthesia Down Under (Australian Synesthesia Association):**
<http://synesthesia.com.au/wp/>
- **Belgian Synesthesia Association:**
[http://www.enotes.com/topic/Belgian Synesthesia Association](http://www.enotes.com/topic/Belgian_Synesthesia_Association)

Synesthesia

➤ **Mixed Signals (Synesthesia On-Line):**

<http://http://www.mixsig.net/>

➤ **Synesthesia Resource Center:**

www.bluecatsandchartreusekittens.com/BlueCatsandChartreuseKittensRel.html

Shyness/Social Phobia

➤ **Phillip Zimbardo's Clinic at Stanford:**

1. www.shyness.com

2. www.shynessinstitute.com

➤ **Anxiety Disorder Association of America:**

www.adaa.org

➤ **Beck Institute:** <http://www.beckinstitute.org/>

Job Coaches/Accommodations/Laws

- **Association for Persons in Supported Employment (APSE) (Onsite Job Coaches):**
www.apse.org
- **Job Accommodations Network:**
www.askjan.org
- **National Disability Rights Network (How to find Disability Law Centers in Your State):**
www.ndrn.org

Promising Practices for Schools

➤ The Promising Practices Network

Highlights programs and practices that scientific research indicates works with children, adolescents and families.

www.promisingpractices.net

Resources: Books/Videos



Helpful Materials for ASD Adult Life Planning

- **Baker, J. (2005). Preparing for Life: The Complete Guide for Transitioning to Adulthood for those with Autism and Asperger's Syndrome. Arlington, TX: Future Horizons.**
- **Autism Speaks, Family Services: Transitions Tool Kit
Download free from
website:**

www.autismspeaks.org/docs/family_services_docs/transition.pdf

Helpful Materials for ASD Adult Life Planning

- **Ford, A. (2007). On Their Own: Creating an Independent Future for Your Adult Child with Learning Disabilities and ADHD. New York, NY: New Market.**

Verbal ASD: Temple Grandin, Ph.D.

- **Cutler, E. (2004). A Thorn in My Pocket: Temple Grandin's Mother Tells The Family Story. Arlington, TX: Future Horizons.**
- **Grandin, T. (2012). Different...Not Less: Inspiring Stories of Achievement and Successful Employment From Adults with Autism, Asperger's and ADHD. Arlington, TX: Future Horizons.**
- **Grandin, T. (2011). The Way I See It: A Personal Look at Autism & Asperger's Second Edition. Arlington, TX: Future Horizons.**
- **Grandin, T. (2005). Animals in Translation. New York, NY: Simon & Schuster.**
- **Grandin, T. (1995). Thinking In Pictures: And Other Reports From My Life With Autism. New York, NY: Vintage.**

Verbal ASD: Temple Grandin, Ph.D.

➤ **Temple Grandin (The Movie):**
www.imdb.com/title/tt1278469/

Nonverbal ASD: Tito Mukhopadhyay

- Mukhopadhyay, T. R. (2011). The Mind Tree: A Miraculous Child Breaks the Silence of Autism. New York, NY: Arcade.
- Mukhopadhyay, T.R. (2011). How Can I Talk If My Lips Don't Move? Inside My Autistic Mind. New York, NY: Arcade.
- Mukhopadhyay, S. (2008). Understanding Autism Through Rapid Prompting Method. Parker, CO: Outskirts.

Nonverbal ASD: Tito Mukhopadhyay

➤ **60 Minutes Video of Tito Mukhopadhyay:**

www.youtube.com/watch?v=YRhaevfLDOY

Books On ASD and Healthy Sexuality

- **Henault, I. (2005). Asperger's Syndrome and Sexuality: From Adolescence through Adulthood. Philadelphia, PA: Jessica Kingsley.**
- **Newport, J., and Newport, M. (2002). Autism-Asperger's & Sexuality: Puberty and Beyond. Arlington, TX: Future Horizons.**

General ASD Issues

- **Attwood, T. (2007). The Complete Guide for Asperger's Disorder. Philadelphia, PA: Jessica Kingsley.**
- **Attwood, T. (1998). Asperger's Syndrome: A Guide for Parents and Professionals. Philadelphia, PA: Jessica Kingsley.**
- **Baron-Cohen, S. (2011). The Science of Evil: On Empathy and The Origin of Cruelty. New York, NY: Basic Books.**
- **Baron-Cohen, S. (2003). The Essential Difference. New York, NY: Perseus.**
- **Ekman, P. (2003). Emotions Revealed: Recognizing Faces and Feelings to Improve Communication and Emotional Life. New York, NY: Time Books.**

General ASD Issues

- **Garcia Winner, M., and Crooke, P. (2011). Social Thinking At Work: Why Should I Care. San Jose, CA: Social Thinking.**
- **Henderson, L. (2011). Improving Social Confidence and Reducing Shyness Using Compassion Focused Therapy. Oakland, CA: New Harbinger.**
- **Henderson, L. (2009). Social Fitness Training Manual: A Cognitive-Behavioral Approach to Treating Shyness and Social Anxiety Disorder. Berkley, CA: The Shyness Institute.**

General ASD Issues

- **Klin, A., Volkmar, F.R. and Sparrow, S.S. (2000). Asperger Syndrome. New York, NY: Guilford.**
- **McAfee, J. (2002). Navigating the Social World. Arlington, TX: Future Horizons.**
- **Myer, R.N. (2001). Asperger Syndrome Employment Handbook. Philadelphia, PA: Jessica Kingsley.**
- **Nowicki, S. and Duke, M. (2002). Will I Ever Fit In? New York, NY: Free Press.**

General ASD Issues

- Ratey, J.J. (2008). Spark: The Revolutionary New Science of Exercise and The Brain. New York, NY: Little, Brown.
- Rourke, B.P. (1995). Syndrome of Nonverbal Learning Disabilities: Neurodevelopmental Manifestations. New York, NY: Guilford.
- Semrud-Clikeman, M. (2007). Social Competence in Children. New York, NY: Springer.
- Social Issues Research Centre (No date). SIRC Guide to Flirting, pages 1 to 16. www.sirc.org/publik/flirt.html.