



PERSPECTIVES

A publication for parents and professionals serving individuals with Autism Spectrum Disorders

Autism filmmaker, Graham Streeter, Releases the Highly-Anticipated Autism Quotient Test for the iPhone

You've heard of the IQ test. Well, now there's an AQ test! That stands for Autism Spectrum Quotient. As part of the Normal Folk feature film project dealing with adult autism, filmmaker Graham Streeter is proud to present the FREE AQ Test (Autism Quotient Test) application (app) for iPhone and ipod touch users.



Streeter, who has been working hard on his feature film and documentary focusing on autism says, "When you're developing a feature film and documentary, it's a really long process. Releasing a phone app to support the autism community is a way to enjoy some immediate feedback while waiting for film funding and strategic partners to come together."

Adapted for the iPhone, The Autism Spectrum Quotient, or AQ, is a questionnaire published in 2001 by Simon Baron-Cohen, Ph.D. and his colleagues at the Autism Research Centre in Cambridge, UK. Consisting of fifty questions, the AQ aims to investigate whether adults of normal intelligence have symptoms of either autism or one of the other autism spectrum conditions. Now, with this easy-to-use app, you can take the test as an adult, or you can take the test on behalf of a child.



The test consists of fifty statements, each of which is in a forced-choice format. Each question allows subjects to indicate their degree of like and dislike, using a Likert Scale from 1-10. The questions cover five different domains associated with the autism spectrum: *social skills; communication skills; imagination; attention to detail; and attention*

to, and switching/tolerance of change.

The AQ Test measures the extent of autistic traits in adults and children. In the first major trial using the test, the average score in the control group was 3.3. Eighty percent of those diagnosed with autism or a related disorder scored 6.4 or higher. The test is not a means for making a diagnosis, however, and many who score above 6.4 and even meet the diagnostic criteria for mild autism or Asperger syndrome report no difficulty functioning in their everyday lives. According to Streeter, "It's a good way to illustrate [that] we are more alike than different."



The AQ Test application is FREE, and is now available on iTunes. http://web.mac.com/grahamstreeter/Site/AQ_2.html. iTunes Download: <http://itunes.apple.com/WebObjects/MZStore.woa/wa/viewSoftware?id=328222960&mt=8>. Watch "Return to Autism" Pre-Documentary Episodes 1-10 Free on YouTube: http://www.youtube.com/watch?v=og_NVCyR9Jo&feature=Playlist&p=58F27E6DB5E5D3F1&index=0&playnext=1

Reprinted from Autism Spectrum Quarterly

"What Does Happy Look Like?"

New book uses colors to better understand emotions

Angry, sad, anxious, excited — emotions are difficult for many children on the spectrum to understand and describe. They experience them, but often cannot say why

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or express what they mean, thus making it difficult for them to communicate effectively with their parents, teachers and peers throughout the day.

It is important for them to grasp the significance of their emotions to know how to better deal with the unexpectedness of the everyday and to understand others' emotions as well.



Much like the color spectrum of a rainbow, emotions range in Intensity. *What Does Happy Look Like?* is a new book by Joseph and Silvana Gallo Karim that allows children to visually identify their emotions and feelings. Associating colors with meaningful text allows children to become more aware of the level of emotions they experience in any given situation. In the following example from the book, the authors use color to express the feeling of anger: "Angry is hot and bright red."

With two of their children on the autism spectrum, the Karims know first-hand the struggle of teaching children how to better comprehend emotions and how they relate to everyday situations.

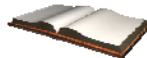
Whether it's being afraid to go to a park where there are unfamiliar faces or the love you feel when your dad sings you to sleep, *What Does Happy Look Like?* brings a colorful new approach to the world of feelings.

Reprinted from www.autism-society.org

The Short Life of a Diagnosis

By Simon Baron-Cohen
Cambridge, England

THE Diagnostic and Statistical Manual of Mental Disorders, published by the American Psychiatric Association, is the bible of diagnosis in psychiatry, and is used not just by doctors around the world but also by health insurers.



Changing any such central document is complicated. It should therefore come as no surprise that a committee of experts charged with revising the manual has caused consternation by considering removing Asperger syndrome from the next edition, scheduled to appear in 2012. The committee argues

that the syndrome should be deleted because there is no clear separation between it and its close neighbor, autism.



The experts propose that both conditions should be subsumed under the term "autism spectrum disorder," with individuals differentiated by levels of severity. It may be true that there is no hard and fast separation between Asperger syndrome and classic autism, since they are currently differentiated only by intelligence and onset of language. Both classic autism and Asperger syndrome involve difficulties with social interaction and communication, alongside unusually narrow interests and a strong desire for repetition, but in Asperger syndrome, the person has good intelligence and language acquisition.

The question of whether Asperger syndrome should be included or excluded is the latest example of dramatic changes in history of the diagnostic manual. The first manual, published in 1952, listed 106 "mental disorders." The second (1968), listed 182, and famously removed homosexuality as a disorder in a later printing. The third (1980) listed 265 disorders, taking out "neurosis." The revised third version (1987) listed 292 disorders, while the current fourth version cut the list of disorders back to 283.

This history reminds us that psychiatric diagnoses are not set in stone. They are "manmade," and different generations of doctors sit around the committee table and change how we think about "mental disorders."

This in turn reminds us to set aside any assumption that the diagnostic manual is a taxonomic system. Maybe one day it will achieve this scientific value, but a classification system that can be changed

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so freely and so frequently can't be close to following Plato's recommendation of "carving nature at its joints."

Part of the reason the diagnostic manual can move the boundaries and add or remove "mental disorders" so easily is that it focuses on surface appearances or behavior (symptoms) and is silent about causes. Symptoms can be arranged into groups in many ways, and there is no single right way to cluster them. Psychiatry is not at the stage of other branches of medicine, where a diagnostic category depends on a known biological mechanism. An example of where this does occur is Down syndrome, where surface appearances are irrelevant. Instead the cause — an extra copy of Chromosome 21 — is the sole determinant to obtain a diagnosis. Psychiatry, in contrast, does not yet have any diagnostic blood tests with which to reveal a biological mechanism.



So what should we do about Asperger syndrome? Although originally described in German in 1944, the first article about it in English was published in 1981, and Asperger syndrome made it only into the fourth version of the manual, in 1994. That is, the international medical community took 50 years to acknowledge it. In the last decade thousands of people have been given the diagnosis. Seen through this historical lens, it seems a very short time frame to be considering removing Asperger syndrome from the manual.

We also need to be aware of the consequences of removing it. First, what happens to those people and their families who waited so long for a diagnostic label that does a good job of describing their profile? Will they have to go back to the clinics to get their diagnoses changed? The likelihood of causing them confusion and upset seems high.

Second, science hasn't had a proper chance to test if there is a biological difference between Asperger syndrome and classic autism. My colleagues and I recently published the first candidate gene study of Asperger syndrome, which identified 14 genes associated with the condition.

We don't yet know if Asperger syndrome is genetically identical or distinct from classic autism,

but surely it makes scientific sense to wait until these two subgroups have been thoroughly tested before lumping them together in the diagnostic manual. I am the first to agree with the concept of an autistic spectrum, but there may be important differences between subgroups that the psychiatric association should not blur too hastily.

Simon Baron-Cohen, the director of the Autism Research Center at Cambridge University, is the author of "The Essential Difference."

Reprinted from www.nytimes.com

Types of Aspergers And Their Subcategories

Are you aware that there are different types of Aspergers, despite the fact that this is a single condition? Just as there are various personalities in neurotypical individuals, there are different traits among people within a certain diagnosis.

What are some types of Asperger behaviors?

No matter which type of Aspergers a person has, there are specific characteristics that they each usually share.

- ⊕ The need for order is apparent in many cases and stereotyped repetitive movements are readily recognized. *These movements are called self-stimulatory behaviors*, and are necessary for self regulation especially because of these individual's sensitivities to sensory input. The repetitive movements are seen as unusual by the general public.
- ⊕ Social deficits are also apparent in individuals with this diagnosis. Children might want to play with others but they don't seem to know how. Interaction with others is often difficult and uncomfortable.

What are the subcategories of these types?

The Logical Type

This subcategory of Aspergers concerns individuals who seem to be very cautious.

- ⊕ They like to know exactly what to expect, and they prefer to have the rules systematically spelled out for them.


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- ⊕ They often have difficulty getting past the analytical stage when completing tasks and assignments.
- ⊕ The need for order and logical sequence can lead to frustration and intolerance for things that appear to be irrational.
- ⊕ The logical type might resist following directions that don't make sense.

The Emotional Type

The emotional type is less likely to lean toward analysis and rules.

- 
- ⊕ This individual is controlled by feelings rather than rational thought.
 - ⊕ Many of their emotions might be difficult to control, and this can lead to anxiety and tension.
 - ⊕ Individuals who fall into the emotional subcategory might experience more frustration, and they may act out more than other types.
 - ⊕ Structure and order help to calm and organize this behavior.

The Rule Type

The rule subtype also loves structure and order.

- ⊕ These individuals need to have everything in its place, including their daily routines.
- ⊕ If rules are not established, this type will make his or her own rules in order to understand and organize his or her surroundings.



The Passive Type

The passive Asperger individual likes to follow directions and thrives in most classroom environments.

- ⊕ Some children in this category may be too complacent.
- ⊕ There is a distinction between compliance and complacency.
- ⊕ The goal is to have some balance.

Asperger syndrome is sometimes associated with depression as well as pediatric obsessive-compulsive syndrome, OCD; attention deficit disorder, ADD; and attention deficit hyperactivity disorder, ADHD.


The defined categories listed above are not set in stone! Many children who have NO diagnosis might display some of these characteristics. The different

types of Aspergers are merely a way of looking at different aspects of the condition.

Reprinted from www.livingwithaspergers.com

First Neuroimaging Study Examining Motor Execution in Children with Autism Reveals New Insights

In the first neuroimaging study to examine motor execution in children with autism, researchers at the Kennedy Krieger Institute have uncovered important new insight into the neurological basis of autism.



ScienceDaily (May 5, 2009) — The study, published online in the journal *Brain*'s April 23 *Brain Advanced Access*, compared the brain activity of children with high functioning autism and their typically developing peers while performing a simple motor task—tapping their fingers in sequence. The researchers found that children with autism relied more heavily on a region of the brain responsible for conscious, effortful movement, while their typically developing peers utilized a region of the brain important for automating motor tasks. Children with autism also showed less connectivity between different regions of the brain involved in coordinating and executing movement, supporting the theory that a decreased ability of distant regions of the brain to communicate with each other forms the neurological basis of autism.

Researchers used fMRI scans to examine the brain activity of 13 children with high functioning autism and 13 typically developing children while performing sequential finger tapping. The typically developing children had increased activity in the cerebellum, a region of the brain important for automating motor tasks, while children with autism had increased activity in the supplementary motor area (SMA), a region of the brain important for conscious movement. This suggests children with autism have to recruit and rely on more conscious, effortful motor planning because they are not able to rely on the cerebellum to automate tasks.

Researchers also examined the functional connectivity of the brain regions involved in motor planning and execution in order to compare the

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activity between different brain regions involved in the same task. The children with autism showed substantially decreased connectivity between the different brain regions involved in motor planning and execution. These results add to increasing evidence that autism is related to abnormalities in structural and functional brain connectivity, which makes it difficult for distant regions of the brain to learn skills and coordinate activities.



“Tapping your fingers is a simple action, but it involves communication and coordination between several regions of the brain” said Dr. Stewart H. Mostofsky, senior study author and a pediatric neurologist in the Department of Developmental Cognitive Neurology at the Kennedy Krieger Institute. “These results suggest that in children with autism, fairly close regions of the brains involved in motor tasks have difficulty coordinating activity. If decreased connectivity is at the heart of autism, it makes sense social and communication skills are greatly impaired, as they involve even more complex coordination between more distant areas of the brain.”

While autism is characterized by impaired communication and social skills, these abilities are hard for scientists to measure and quantify. In contrast, the neurological processes behind motor skills are well understood, and motor tasks can be objectively observed and measured. Examining motor execution provides researchers a way to study the basic brain systems important for learning and guiding actions, which has important implications for all learned behavior, including complex communication and social skills. Researchers at the Kennedy Krieger Institute have been using the study of motor skills as an important window into the neurobiological basis of autism.

“When we learn to interact with the world around us, we acquire many skills,” said Dr. Mostofsky. “Whether they are complex social skills or simple motor skills, they all begin with the brain responding to a stimulus and learning the appropriate response. In this way, studying motor skills provides important information about how the brain of a child with autism learns differently, and how autism affects the basic neural systems important for acquiring all skills, from tapping your toes in rhythm to recognizing

emotions in the facial expressions of others.”

Reprinted from Autism Spectrum Quarterly, Winter 2009

Clinical Tests Begin on Medication to Correct Fragile X Defect

U.S. Department of Health and Human Services
NATIONAL INSTITUTES OF HEALTH NIH News
National Institute of Mental Health (NIMH) <<http://www.nimh.nih.gov>>

NIH-supported scientists at Seaside Therapeutics in Cambridge, Massachusetts are beginning a clinical trial of a potential medication designed to correct a central neuro-chemical defect underlying Fragile X syndrome, the most common inherited cause of intellectual disability. There has to date been no medication that could alter the disorder’s neurologic abnormalities. The study will evaluate safety, tolerability, and optimal dosage in healthy volunteers.

About one-third of males with Fragile X syndrome also have autism or autistic-like behavior that affects communication and social interaction.

The work is the outcome of basic research that traced how an error in the fragile X mental retardation gene (FMR1) leads to changes in brain connections, called synapses. The changes in turn appear to be the mechanism for learning deficits in Fragile X syndrome. The new trial tests Seaside Therapeutics’ novel compound, STX107. That selectively and potently targets the synaptic defect.



Thomas R. Insel, M.D., director of the National Institute of Mental Health, said, “This project is the culmination of years of fundamental research, first identifying the genetic mutation, and later deciphering the biochemical consequences of this mutation. Now, with the initiation of this first clinical study, we move one step closer to understanding how this novel candidate may play a critical role in improving the lives of individuals with Fragile X Syndrome.”

Randall Carpenter, M.D., president and chief

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executive officer of Seaside Therapeutics, and Mark Bear, Ph.D., Seaside's scientific founder, are leading the research. Dr. Bear is a Howard Hughes Medical Institute investigator and a professor of neuroscience at the Massachusetts Institute of Technology, Cambridge, Massachusetts.

The National Institute of Mental Health, the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), and the National Institute of Neurological Disorders and Stroke (NINDS) have provided grant support. Private foundations providing funding include the advocacy groups Autism Speaks and FRAXA Research Foundation.

Fragile X syndrome is the most common inherited cause of intellectual disability, affecting an estimated 1 in 4,000 males and 1 in 6,000 females.

The syndrome causes a range of developmental problems, including learning disabilities and cognitive impairment. People with Fragile X syndrome may have anxiety and attention deficit hyperactivity disorder. About one-third of males with Fragile X syndrome also have autism or autistic-like behavior that affects communication and social interaction. Usually, males, who have only a single X chromosome, are more severely affected than females.



People with Fragile X have DNA mutations in the FMR1 gene that, in effect, turn off the gene. Research in recent years by Dr. Bear and colleagues has identified the molecular consequences of this silencing of FMR1. Normally, the protein product of the FMR1 gene acts to dampen the synthesis of proteins at synapses that are stimulated via a specific class of receptors on brain cells—metabotropic glutamate receptors (mGluRs). Without the brake provided by FMR protein, synaptic protein synthesis is excessive and connections do not develop normally. This basic research provided the basis on which to develop medications that could correct the defect.

The current study will focus on a compound, designated STX107, that selectively inhibits one type

of mGluR receptor, mGluR5. Evidence in mice with Fragile X-like symptoms suggests that reducing levels of mGluR5 can restore normal synaptic protein synthesis and improve function.

The initial phase 1 study of STX107 will involve healthy volunteers. If results suggest that the medication is safe and tolerable, the study will progress to a phase 2 test of dosage and efficacy in adults with Fragile X syndrome. If STX107 shows promise in adults, the compound will be assessed for pediatric safety prior to initiating clinical trials in children.

Reprinted from Autism Spectrum Quarterly, Winter 2009

Assessing Information Processing and Capacity for Understanding Language in Non-Verbal Children with Autism

April Benasich, Ph.D., Rutgers University; Valerie Schafer, Ph.D., City University of New York

Individuals with autism who are non-verbal are not included in research studies and hence very little is known about their abilities. The paucity of studies is due to logistical issues that include presumed compliance difficulties and the lack of expertise among researchers who can design and implement studies in individuals who may comprise 30-50% of the ASD population. The ability to perform research in this area is also greatly hindered because most instruments designed to assess individuals with ASD require expressive language skills. When applied to the non-verbal population, individuals typically score at the lowest levels on cognitive tests and are considered "low-functioning." This characterization occurs despite reports from family and caregivers that receptive language is indeed quite functional in some of these individuals. The proposal from Dr. Benasich and colleagues will utilize research strategies to directly assess the capacity for receptive language in non-verbal individuals with autism at a range of ages using EEG and information-processing



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Conferences

Date	Title & Location	Speakers	Fee	Contact Info
Jan. 21 & 22, 2010	PECS Basic Training Kalamazoo	Jamie Wedel, M.Ed.		pecs.com 269-343-3333
Feb. 9, 2010	Bully Proofing Made Easy Grand Rapids	Israel C. Kalman, MS.	Varies	www.crosscountryeducation.com 1-800-397-0180
Feb. 10, 2010	Bully Proofing Made Easy Lansing	Israel C. Kalman, MS.	Varies	www.crosscountryeducation.com 1-800-397-0180
Feb. 11, 2010	Bully Proofing Made Easy Sterling Heights	Israel C. Kalman, MS.	Varies	www.crosscountryeducation.com 1-800-397-0180
Feb. 24, 2010	Bully Proofing Made Easy Detroit	Israel C. Kalman, MS.	Varies	www.crosscountryeducation.com 1-800-397-0180
Mar. 12, 2010	Autism in the Classroom: Simple & Effective Strategies to Learn Today & Use Tomorrow Grand Rapids		\$247	www.horizonsdrc.com 616-698-0306
Mar. 13, 2010	Learn 5 Simple Steps to Better Communication, Behavior & Relationships for You & Your Child Grand Rapids		\$97	www.horizonsdrc.com 616-698-0306
May 13, 2010	Aggressions, Rage, & Meltdowns! Strategies for Managing Students with Behavioral, Emotional, & ASD Detroit	Kaye Otten	\$199	www.sdresources.org 800-678-8908

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tasks that they have previously developed for studying other developmental disability populations. These experiments will be, to our knowledge, the first that are dedicated to assessing receptive language capabilities in a population of subjects that lack functional language output capabilities.



What this means for people with autism: Our understanding of cognitive functions in individuals in ASD is based almost exclusively on studies involving individuals who are characterized as "high functioning." The proposal will characterize the cognitive abilities of a very neglected subgroup of individuals with ASD and bring needed expertise to helping individuals who have been deemed "low-functioning." Information regarding their actual

cognitive abilities could revolutionize the way these individuals are educated. For additional information on these abstracts, as well as other science news, log onto: <http://www.autismspeaks.org/>

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Support Groups

- × Autism Support Group of Genesee County:
www.geneseeaautism.org
- × ASA/Oakland County Chapter Events:
www.asaoakland.org
- × OUCARES, www.oucares.edu offers soccer, baseball, music, learn through movement, social skills, martial arts, basketball, animals in art, cartooning, & after hours adult social. Call 248-370-2424 for more information.
- × Mott Children's Health Center Parent Empowerment Program for parents and caregivers of newly diagnosed or suspected ASD. Karen Shoemaker 767-5750, ext. 5292
- × Kathleen's House: www.kathleenshouse.org, 810-720-0667.
- × Young Adult HFA/Asperger Group: Patrick or Mary Kubik. Call 810-603-2166 or e-mail: pk1851@gmail.com or marykubik@gmail.com

Websites

- ☞ Autism Society of America: www.autism-society.org
 - ☞ Autism Society of Michigan: www.autism-mi.org
 - ☞ ASA Oakland County Chapter:
www.asaoakland.org
 - ☞ Dr. Tony Attwood: www.tonyattwood.com
 - ☞ On-line Asperger's Information and Support-OASIS: www.aspergersyndrome.org
 - ☞ The Gray Center: www.TheGrayCenter.org
 - ☞ Liane Holliday-Willey: www.ASPIE.com
 - ☞ Free pictures of visual schedules, etc.:
www.usevisualstrategies.com
 - ☞ Picture Exchange Communication System:
www.pecs.com
 - ☞ TEACCH: www.teacch.com
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