

Coming to Terms with Asperger's Syndrome:
The Alien Point of View
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Since life is challenging enough already, and the other kids can be so cruel, let's start by pronouncing this name Ahs'pergers (*a* as in father) instead of ass-burgers or ass-purgers. Please? This is, after all, the way the Austrian Dr. Asperger would have pronounced it.

After 57 years of befuddlement over why I'd always felt like such an outsider or alien in this human race, I discovered only last year that I have a neurological wiring anomaly. It didn't identify me as belonging to a separate species, as I had hoped, but it did set me neurologically apart in the company of many others. I first began to recognize myself (and the way that others treated me) in a quirky TV character, Bob Melnikov, played by Dmitry Chepovetsky, on an intelligent Canadian dramatic series "ReGenesis". Until this time I had simply assumed that I was just "ever so special". I was very smart, but socially awkward, painfully shy and a little tweaked or wounded. As a fairly competent athlete, I never fit into the geek model. More recently, the archetype of "cynical curmudgeon" just didn't explain enough. It didn't take long for this discovery to account for almost everything that anyone ever thought weird about me, and to form a framework or template with which to examine almost all of my various personality and character quirks and defects. The condition isn't contagious, or fatal, and as long as I don't return to drinking and smoking in a silly effort to simulate normalcy, it's no longer harmful to my health. In fact, despite the associated loneliness and social discomforts, I would join with a high percentage of those of us so afflicted in not wanting a cure, because unlike most psychological and neurological disorders, this condition often comes with some very interesting gifts. And even when it's not worth the loneliness, it sometimes helps to tell ourselves that. It's hard to forget e.e.'s words, "and kisses are a better fate than wisdom".

The preferred term for self-reference among those with Asperger's Syndrome has become *aspie*, singular (coined by Liane Holliday Willey in 1999), so I will refer here to the symptoms and behaviors of *aspies*. I've decided to write this booklet in order to a) further explore the subject for my own education, or else make a fearless and searching moral inventory, b) share any new insights or new combinations of old insights with others just embarking on this journey, and I do have a few of those to share, as conjecture and hypotheses, not even theories yet, c) try to account and/or apologize for my previous social sins of omission and commission to anyone who still wonders or cares why I might have treated them "like that", d) try to dissolve some of my own resentment and rancor related to lack of social acceptance, with forgiveness, by understanding how natural it may be for normal human beings to respond to the aspie's odd personality traits and stilted body language with condescension, disrespect and avoidance, and e) set forth something between a user's manual and a *caveat emptor* for those who want to understand their aspie mates better, or for someone who might want to take an aspie on as a fixer-upper project (oh please, pick me, pick me! I think I'll know better next time). Some of this will be unavoidably autobiographical, but this is all for the sake of illustration, not self-effacement or boasting. The memoirs will come later. In some of this discussion I will try to be unashamedly frank.

Asperger's Syndrome (AS) is termed an *autism spectrum disorder* (or ASD). ASD's are a group of neurological conditions or pervasive development disorders characterized by varying degrees of impairment in socialization and communication skills, sensory overload issues, and varying degrees of repetitive or restrictive patterns of thought and behavior. Other ASD's include: Classic Autism, Savant Syndrome (Rain Man), Rett Syndrome, Childhood Disintegrative Disorder, PDD-NOS (Pervasive Developmental Disorder Not Otherwise Specified) and High Functioning Autism. When autism is regarded as a spectrum analogous to visible light, High Functioning Autism (or HFA) might be thought of as the green-blue-violet or higher frequency end of the

rainbow, the end that shows the least developmental impairment in that part of overall mental development that is the least concerned with and/or dependent upon successful social integration. Asperger's Syndrome tends to occupy the higher or blue-violet end of the HFA spectrum and is frequently found in people described as gifted. This does not mean that all or even most aspies are gifted. This is not synonymous with genius, geek or nerd, although certain demographic enclaves such as Silicon Valley, the MIT campus and JPL/Caltech will show a much higher than normal rate of AS occurrence.

I would also support a still higher articulation, not now in use, which might be thought of as High Functioning Asperger's, to shed more light on those who tend to make a more functional use of the condition as a "skill set" and somehow find ways to make significant contributions to culture and civilization despite the social challenges that they may face. This would be a relatively narrow band within the Asperger's violet part of the spectrum, one marked by effective cognitive skills combined with either less natural dysfunctionality or a learned resilience and ability to find ways around the shorted circuits. Within the fields of social work and mental health professionals, and their patients or clients, there is a lot of resistance to ideas like this, and to holding up examples of hard-to-imitate, highly functional (however challenged) people as role models for inspiration. Furthermore, among both the politically correct and those who tend to embrace either the disease or the victim mentalities, you will find a lot of resistance to articulating any sub-categories at all within the entire autistic spectrum. This is in part because the larger the class of victims, the greater is its political clout. Autistics *en masse* look like a more powerful special interest by having bigger numbers - it's a puffer fish thing. But we are not all one big unhappy family of victims. And whether we have a concept of spectrum or not, red still differs from blue and plants will bounce back all of the green, and to deny all of this is just to render ourselves inarticulate. I think it's important to untangle the threads in order to do the needed science, to identify the genes involved, the different parts of the brain affected, the details, behaviors, components and dimensions. And we're aspies and that's supposedly one of our great skills. For my own part, I want a clearer picture of the specific gifts that Asperger's confers in order to make the most of them, and a clearer, more detailed picture of my weaknesses, problems and character flaws in order to work more successfully around them. For this I want the names and properties of every color across the spectrum. And I'm also every bit as interested in knowing which problems that I don't have. This is not an attempt to distance AS from the rest of the autism spectrum, or from any stigma that might be associated with lower or less effective cognitive functionality.

The position that I will articulate here is that there is little point in an aspie whining about being an "Asperger's sufferer" when there is no cure in sight, unless social welfare is his only option. Instead, the best thing to do with what's left of this life is to just suck it up and make the best plays we can with the hands we've been dealt. There is an extent to which we can choose between Asperger's Disease or Disorder and Asperger's Syndrome. One who chooses the former can be no more than a victim - and thus his fate can be predicted. Some of us actually think that the social alienation and loneliness is a fair price to pay for the cognitive skills and the gifts of drive, perspective and focus that we've been given. I will sketch some of these later. Again, this paragraph is about High-Functioning Asperger's. There are a lot of aspies out there too handicapped by their condition to function without a support structure and a greater autonomy is in fact out of the question. These people may truly need to whine a bit to get the help that they need, I just don't want to go there personally, or to walk you there.

Asperger's Syndrome was first described by an Austrian psychiatrist and pediatrician named Hans Asperger, who, in 1944, studied four children who had difficulties with social integration. Their intelligence appeared normal, but these children lacked nonverbal communication skills, failed to demonstrate empathy with their peers, and were physically clumsy. Their speech was either odd or unusually formal, and they had narrow and dominant interests. Dr. Asperger referred to this condition as "autistic psychopathy", and also as a personality disorder distinguished by social isolation. In 1981 an English physician named Lorna Wing published case studies of children with similar

symptoms, which she referred to as "Asperger's Syndrome", bringing Dr. Asperger's early observations out to a wider world. In 1992 the syndrome was included as a diagnosis in the tenth edition WHO's diagnostic manual, International Classification of Diseases (ICD-10). In 1994 it was added to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), the American Psychiatric Association's diagnostic reference.

Prevalence

About one in 250-300 people clearly meet the officially adopted diagnostic criteria for the syndrome, and roughly three-quarters of these are males. As many more will approximate the criteria more loosely but fail to meet all of them, and here the ratio of males to females becomes slightly more balanced. It is thought by some that this is due to females normally having more cultural opportunities to develop social skills as learned, as opposed to instinctive or hard-wired, behaviors. AS has been much better studied in children but it is a lifelong condition. The lack of study of adults with AS is unfortunate because, while there is no cure for the condition, many adults have learned adaptive or compensatory strategies which could prove extremely helpful to younger people who are still working without a finished operator's manual.

Those who believe that there are no significant differences between the races of humanity will protest any look at the dimension of racial distribution, but I want to go out on a limb following "Aspie-quiz" and join in predicting that studies will likely find a greater prevalence among the Caucasians, then the Asians and Amerindians, and lastly the Africans. My own guess is that differences in prevalence could be attributable to severe environmental pressures (particularly climatic and bound to life in an ice-age north) and thus to the occasional extraordinary utility of innovative problem solving, or thinking outside of the cultural box. There will be more on this later. There is an hypothesis in circulation crediting interbreeding with Neanderthals for some of the European and AS genetic differences, but I will reserve judgment on this until the science is done. I still tend to give credit for much of modern humanity's problem-solving ingenuity to Toba, the Sumatran supervolcano that nearly wiped us all out 75 thousand years ago. I am a big fan of selective pressure as explanation.

One thing that is seldom pointed out relative to the prevalence issue is that there is also a spectrum in the severity of the condition. There appear to be several genes involved in the predisposition to the syndrome and different levels of exposure to the potential triggering factors such as prenatal hormone levels that lead to the syndrome's epigenetic expression. Many seem to have an adaptability or resilience unrelated to, or in addition to, the problem, while others are truly handicapped or debilitated by their symptoms. In fact it is possible that many aspies are so adaptable or resilient that they can override or overwrite the neural wiring difficulties and develop second-nature social skills sufficient to "pass" in normal society, without ever suspecting that they are "disordered". A lack of squeaky wheels may be skewing the prevalence statistics.

I am in the middle of these two extremes. I've escaped many of the more debilitating symptoms and all of the known comorbidities. I lack all of the repetitive stereotypy gestures. I limp along socially, except that I don't do at all well in crowds or with multiple strangers. I am not a party people, and not a dancing fool. I never could tolerate long-term, regular employment, or be tolerated either, but I was able to adopt a lifestyle of voluntary simplicity so that it never required much money to survive. This gave me the added advantage of 40 hours a week of free time to pursue my aspergian obsessions and studies. I even have a modest number of close friends, and dozens of people who will hug me hello and goodbye, on account of me being secretly a lot sweeter and kinder than you might suspect from my writings. And despite a slow start as a nearly 19-year-old virgin, I got more than caught up in the partners and lovers department. But in spite of some minor successes in social integration, nobody has ever accused me of being well-adjusted or even halfway normal.

Diagnostic Criteria

This is the "official" set of

Diagnostic Criteria for Asperger's Disorder (from 299.80 DSM-IV)

The essential features of Asperger's Disorder are severe and sustained impairment in social interaction and the development of restricted, repetitive patterns of behavior, interest, and activity. The disturbance must clinically show significant impairment in social, occupational, and other important areas of functioning. In contrast to Autistic Disorder, there are no clinically significant delays in language. In addition there are no clinically significant delays in cognitive development or in the development of age-appropriate self-help skills, adaptive behavior, and curiosity about the environment in childhood.

A. Qualitative impairment in social interaction, as manifested by at least two of the following:

- * Marked impairment in the use of multiple nonverbal behaviors such as eye-to-eye gaze, facial expression, body postures, and gestures to regulate social interaction
- * Failure to develop peer relationships appropriate to developmental level
- * A lack of spontaneous seeking to share enjoyment, interests, or achievements with other people (e.g., by a lack of showing, bringing, or pointing out objects of interest to other people)
- * Lack of social or emotional reciprocity

B. Restricted repetitive and stereotyped patterns of behavior, interests, and activities, as manifested by at least one of the following:

- * Encompassing preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus
- * Apparently inflexible adherence to specific, non-functional routines or rituals
- * Stereotyped and repetitive motor mannerisms (e.g., hand or finger flapping or twisting, or complex whole-body movements)
- * Persistent preoccupation with parts of objects

C. The disturbance causes clinically significant impairment in social, occupational, or other important areas of functioning.

D. There is no clinically significant general delay in language (e.g., single words used by age 2 years, communicative phrases used by age 3 years)

E. There is no clinically significant delay in cognitive development or in the development of age-appropriate self-help skills, adaptive behavior (other than in social interaction), and curiosity about the environment in childhood.

F. Criteria are not met for another specific Pervasive Developmental Disorders or Schizophrenia.

From the World Health Organization, International Classification of Diseases ICD-10
F84.5 Asperger's syndrome

A. A lack of any clinically significant general delay in spoken or receptive language or cognitive development. Diagnosis requires that single words should have developed by two years of age or earlier and that communicative phrases be used by three years of age or earlier. Self-help skills, adaptive behaviour and curiosity about the environment during the first three years should be at a level consistent with normal intellectual development. However, motor milestones may be somewhat delayed and motor clumsiness is usual (although not a necessary diagnostic feature). Isolated special skills, often related to abnormal preoccupations, are common, but are not required for diagnosis.

B. Qualitative abnormalities in reciprocal social interaction (criteria as for autism).

C. An unusually intense circumscribed interest or restricted, repetitive, and stereotyped patterns of behaviour, interests and activities (criteria as for autism; however it would be less usual for these to include either motor mannerisms or preoccupations with part - objects or non-functional elements of play materials).

D. The disorder is not attributable to the other varieties of pervasive developmental disorder; schizotypal disorder (F21); simple schizophrenia (F20.6); reactive and

disinhibited attachment disorder of childhood (F94.1 and 2); obsessional personality disorder (F60.5); obsessive-compulsive disorder (F4

I would submit that these recently established sets of criteria are already in need of significant revision and expansion. One very interesting feature of this syndrome is that it is populated by an unusually high percentage of intelligent and articulate people who, as a sub-species of autistics, have often spent an abnormal percentage of their time alone in self-examination. Since this condition was for the most part unknown until 1992-1994, most adult aspies have grown up looking at their condition through conceptual and interpretive lenses other than the formal diagnostic criteria. In other words, there is a lot of perspective to draw from that is not colored by the newer analytical criteria and lingo. True, many of these old lenses offer little hope of successful integration into society, and many will simply dismiss the set of conditions as the lot of the "social misfit" or "eccentric genius" who has mistakenly chosen to go down the wrong path into a life of irreversible weirdness. The argument for spending a good deal of effort refining the diagnostic criteria should be most obvious to those who have had a lifelong collection of questions and worries about their idiosyncrasies, peculiarities and character defects suddenly answered by an AS diagnosis. I think there will be some consensus that it would somehow have been much better to have known what it was that made us "ever so special".

The causes of AS are not yet fully understood. Some are clearly shared more broadly with the autism spectrum in general and some are much more specific. At the very least there is a polygenetic predisposition to the condition, one that is triggered by environmental factors during embryonic (and possibly early post-natal) growth. Excessive *in utero* exposure to testosterone, especially in the first trimester, is frequently suggested as a culprit. Short index fingers relative to ring fingers are a known physiological indicator of high in-utero testosterone levels, but this ratio is also a suggested predictor of competent athleticism. The manifestation of AS follows an epigenetic alteration during neural development that will trigger a typical cascade of neuropathologies. It is well known and has been well demonstrated that aspies are indeed "wired differently" than normal people and they will often access different parts of the brain for different tasks than normals. Because of this actual physical difference in neural wiring, aspies will frequently refer to people who are wired normally as *neurotypicals* (or NT's). The existence of alternative neural structuring is referred to as *neurodiveristy*. I will use the term NT throughout to refer to the normally wired.

The relative proportions of neuron types in the brain are also affected. So is the communication between some of the cell types and groupings. Current areas of intensive research include the amygdala, mirror neurons and Purkinje cells. I won't go into this in a great deal of detail since most of the research is done with autism in general, the growing bank of data is available online and, as with most of modern neuroscience, anything said here will soon be out of date. There is mounting evidence that the symptoms of AS are at least in part the result of hyper-functionality, hyper-sensitivity and/or hyper-reactivity of certain neurons and processes, at least at the more local levels of neural processing, such that it may be over-sensitivity and over-stimulation that leads to certain diminished functions. This has led some to propose calling autism in general an "Intense World Syndrome". This phenomenon of sensory withdrawal may be similar to being unable to smell a skunk when you've been sprayed directly, or being unable to feel pain when an injury is severe - in other words, a de-sensitivity that may be the opposite of an insensitivity.

Symptoms and Traits

The following discussion expands on the "official" list of symptoms and traits, broken down into a few general categories. It should be noted that most of these may be experienced by neurotypical people as well, and in NT's they may be dismissed as simple shyness, or clumsiness, or inattention, or personality maladjustments, etc. It is the overall

pattern and combination of these symptoms and traits, together with their relative intensity, that characterizes the aspie. It should also be noted that there are many different kinds of cognitive skills and intelligences that may be affected, with a high degree of individual differences between aspies. Some aspies have comorbidities, other accompanying but distinct syndromes such as OCD, ADHD, Tourettes or Savantism. Some aspies are musical geniuses. I'm a total musical idiot, even with the triangle, the Jew's harp and the kazoo. Except that I play the ears well - I will sit down and listen while others talk through the music.

Sensation

Most aspies seem to have at least one major complaint about being too sensitive to sensory stimuli. Sometimes it's only one of the senses. Not uncommonly, an aspie's senses can run together in synaesthesia. There is often a vulnerability to sensory overload, especially in public places like malls, grocery stores, social gatherings and parties, causing an aspie to narrowly constrain his focus and hurry through the experience. Sometimes this hypersensitivity leads to a sense's growing numb or shutting down. Sensory simulation may be too directly wired to reactive mechanisms and reflexive responses, leading to explosive or panic reactions to certain stress triggers. This is a different phenomenon than a psychological phobia. Aspies can too easily form lifelong irrational aversions to certain stimuli when given associations that are made too tightly or exclusively. Of course the greatest threat of sensory overload occurs in social contexts, particularly in novel situations among multiple strangers, but this is a subject for a later section.

Vision complaints are most commonly about brightness or color. I will often have to wear sunglasses on cloudy days. Public streetlights, with a bit of synaesthesia, just yell at me, and I will confess right here and now to having shot a few to death in my day, especially when they interfered with comet watching. Fortunately, I live 65 miles from the nearest stoplight. Loud colors are sometimes really annoying and I could never wear them – or bright, busy patterns either. That particular aversion also combines with a desire to remain invisible in public.

Hearing complaints are common, especially with bright, sharp, bass, sudden or loud noises. Some aspies overreact to very subtle sounds that others easily filter out. A strong aversion to the sound of a toothbrush or water dripping can actually compromise an aspie's health and hygiene. Some sounds seem to set off panic reactions based on past associations. For me, sometimes, it feels like certain sounds are physically attacking me - especially barking dogs, vacuum cleaners and heavy base in car stereos. I do vacuum, though, with earplugs and headphones, but I file frequent police reports on the owners of barking dogs because these people are just too stupid to learn any other way. I love music but, like many NT's as well, I can't get anywhere near opera, heavy metal, hip-hop or virtuoso jazz. That might just be good taste though.

Touch can elicit a wide range of responses in aspies. Textures and other tactile sensations can fascinate or repel way out of proportion to their intensity. I get especially fascinated hefting things that are heavier than they look, or running fingers through sand, or feeling the wind, which otherwise drives me nuts by stripping the negative ions away. I can't wear clothing that's in any way uncomfortable. Compared to some aspies I have a fairly mild overreaction to clothing tags - I will grudgingly let some remain to tell me which way around the shirt goes. I haven't put on a necktie since my high school picture forty years ago, except as a headband. Shoes usually bother me a lot more than having rough surfaces underfoot and I once went three full years without putting them on once. I don't like oils or lotions, except somehow they feel a lot more right between bodies. I love both heat and cold when they are dry and come in short bursts. I love hugs and affection, but many aspies have strong aversions to being touched, or more narrow aversions, as to insensitive, repetitive stroking or being touched by surprise.

Smell and taste also elicit a lot of overreactions plus and minus. I think smells will bring back strong memories for everybody though, what with our big human associative neocortex being a growth on the old fish brain's olfactory bulb. But I for one will almost

gag on perfume, or cat piss under the building, or yesterday's garlic breath. Tastes are an issue with me. I can't stand things like watermelon, celery or cucumber. I even have a list of foods that I won't eat posted on my fridge, just in case some friend wants to try cooking for me - because as an aspie, if it goes as far as getting cooked, I won't eat it just to be polite.

Kinesthetic senses belong in this group (we have many more than five senses). In fact, this may be the most affected sensory group with AS, and the one which ultimately leads to the greatest dysfunction. This category of sensation gives us the information we need about our orientation, balance and acceleration in space (otolithic and vestibular, in the inner ear) and the position of, and physical stresses felt by, our bodies (proprioceptive, in muscles, tendons and joints). Too much (and then subsequently too little) sensory information from these sources may be one of the leading causes of an aspie's problems with eye-hand and other coordinations, awkward posture, gestures, gaits, voice or tonal management and so on. These in turn adversely affect non-verbal communication in general. This connection may be the least well explored of the important aspects of the syndrome. Do you remember this poem by the great Anonymous, "The Centipede's Dilemma"?

A centipede was happy quite,
Until a frog in fun
Said, "Pray, which leg comes after which?"
This raised her mind to such a pitch,
She lay distracted in the ditch
Considering how to run.

Consciousness is not always such a good thing. Unavoidable conscious attention on processes that in NT's are completely subliminal can really tangle things up. Even though people say that it takes fewer muscles to smile than to frown, an aspie will probably have a great deal of trouble just making up a smile and putting it out there on his face for the world to see. He doesn't know which muscles to use. It's just too complicated to do consciously. If he can manage to just fuggediboudit, then his face is only going to show what he is genuinely feeling. If he can do some quick method acting and trick himself that way into being genuinely happy on command he might then be able to smile successfully for the camera. But otherwise it's going to be one rough and crude imitation of a smile if he's not really there in his happy place.

Clumsiness is often cited as a major (but not necessary) aspie symptom. Again I'm not sure how much of this is simply a function of too much social self-consciousness and too much attention paid to kinesthetic sensory inputs. I feel clumsy in team sports, so I never played them much. Baseball bores me silly, but I'll use it for an example. For some reason, I don't think I ever once went to bat in softball without getting at least a base hit - a lifetime thousand average. Keep your eye on the ball fit my focus skills well, and besides I had three chances each time at bat. But self-consciousness would often overwhelm me when fielding (that's all-or-nothing with everyone staring) and I never could figure out the kinesthetically guided mechanics of not throwing like a little girl. So I stayed with the lonely sports, swimming, running and surfing and did well there. I put in some years as a short order steak house cook, tucked way back in a kitchen without an audience, and I found myself moving there with a lot of grace and speed, such that I earned the nickname Rocketman. I'm talking about having 50 different short-order dinners cooking at once, solo. This makes me think that a lot of the gross motor difficulties assigned to AS follow upon social self-consciousness - not all, but this may be a big contributing factor. I might hold some sort of a record for the worst first ten seconds in high school. I came in just as the bell rang for the orientation class, the last one there. The only seat left was front and center. It was the kind of seat with the attached L-shaped desk, onto which I set my tall stack of new textbooks. Just as I sat down the weight of the books tipped the chair over and we all landed in a pile on the floor. I'd give a lot to have had the presence of mind to say something quickly like: "It's going to be a long four years". But I will still be your valedictorian.

Children with AS can suffer developmental delays in such activities as riding a bicycle, negotiating playground equipment, team sports, playing ball, etc. It would probably be worth a study to compare how well they did with and without others watching. But another serious culprit might be a diminished functionality in mirror neurons, which help us to run internal simulations of the positions, movements and activities that we perceive other people experiencing. These help us to imagine ourselves inside another person's activity and so help us learn to perform that activity. Without good imitation skills it's no wonder that learning certain skills takes longer.

More delicate eye-hand and other fine motor coordination is often a problem. I suspect that difficulties here are more likely a problem of sensory rather than social self-consciousness. I had trouble making my cursive handwriting look satisfactory, so at about age thirteen I just threw my cursive style away completely and taught myself my own way to print quickly. I can't draw a crooked line or a good tree to save my life, and yet I make a good part of my living drawing nice-looking pictures of houses, using templates and straightedges.

Kinesthetic overstimulation may also contribute to awkwardness of gait and posture. As a kid I didn't get teased a lot (as many aspies are) but I did catch some harsh comments from kids who disapproved of my walk - too fast, shoulders too far back, and my too-long arms confused about where to go. I worked on it some, but I still walk very fast and tend to pay too little attention to the social world around me. I've also been criticized for inappropriate posture sending the wrong messages. Half of the time the criticisms were right and I would indeed be telling them nasty things that an NT would have censored. But the other half was just a simple disconnect between my body and the rest of the situation.

There seems to be a big difference made by consciousness in activities that involve complex movements with lots of changes in speed and direction. The key to grace there is to get "into the zone", a state characterized by spontaneity and flow instead of self-awareness. This may be a harder state of mind for the aspie to access, but only until he learns just how impressive his powers of concentration can be. I once got involved in a game of "lightning pool" with four others on a big, 9 ft. professional table. We were all pretty good and could each run that table maybe once a night. But we didn't often do that twice in a row. In this game, we gave ourselves no more than two seconds from the time the cue ball stopped to make our next shot. For some reason, not one of us sunk a ball on the break, but all four of us in row ran the table. That's the zone. Another favorite thing to do, at least when I was younger, was to run across boulder fields or rocky streambeds barefoot, fast enough that a slip would lead to injury. That motivation drove the needed focus.

Attention and Focus

Some people regard AS (and autism in general) as fundamentally an "attention allocation problem". It is thought by many that because aspies have naturally overactive neural inputs and over-connected local neural networks, the characteristic aspie behavior is largely behavior necessary to either limit or select this input effectively, or to somehow apportion the attention it draws in optimum ways. Much of aspie activity, then, is involved in structuring life to ignore certain parts of the world. This is sometimes called the monotropism hypothesis, or attention tunneling. Here, mental or conscious attention is a limited resource and autistic behaviors are strategies for distributing this limited attention within the brain.

Conscious attention tends to be drawn most quickly and automatically to sensory or perceptual indications of novelty. Arousal remains heightened until the stimulus is perceived to be something more familiar. This is a function of the reticular activating system, which has its locus much too deep in the brainstem to be subject to much conscious control. Analogously to novel sensory stimuli, novel notions and concepts disturb the peace of settled systems of conceptual thought. There are several artificial strategies that may be consciously deployed to reduce the sense of novelty or the element

of surprise - and all of these concern some form of negative entropy, the maintenance of a shield of order held forth against the chaos.

The first strategy is orderliness itself. Aspies with the OCD comorbidity can get particularly obsessed with this one. But even a high-functioning non-OCD aspie will do a lot of things to keep his world tidy. He will often show a strong preference for established routines and consistency. He likes explicit agendas. He wants to know what comes next and to be prepared for it. He will tend to dislike changes in routines and may become visibly shaken and agitated by them. I have a fairly strong need to control my immediate environment, which has pretty much relegated my lifestyle to rural outposts. You will not find an unsharpened pencil in my home and there is always a notepad in reach. I wish I had a reliable woman nearby. My ability to work extends to long uninterrupted hours where I lose all track of time, but I need a fairly stable external structure and limited interruptions, in addition of course to plenty of coffee, and not the placebo kind. This kind of pre-arrangement of the working space has a lot in common with my preferred way to take LSD back in the 60's. The cozy, safe and controlled environment that we would set up at the beginning was not for the purpose of not growing or changing - rather, it permitted a bolder exploration within the mind by focusing the attention where this attention mattered the most. It is my safe and predictable environment at home now that allows me to create, or to think up things unthink up before. A quantum of novelty in the direction of focus is good.

However, with that said, I nevertheless got the wanderlust and spent a few years launched into the unknown, hitchhiking around North America and the Pacific islands with a backpack and a blank hitchhiking sign, or one that just read "beyond". The experience was of course rich with stimulation and new things to learn. It might have been the simplicity of the lifestyle and the ease of its maintenance that allowed me to take in the amount of novelty I that experienced. This was normally done alone. And with hitchhiking you can have long and informative conversations with busy drivers without being distracted by lots of body language and eye contact. I was able to learn a lot on the road.

The want of order extends to the ordinal numbers. As an integral part of good attention apportionment, we aspies will do a lot of prioritizing. We probably invented triage. We are judgmental about the relative importance of things. We dismiss the things that don't matter to our objectives. Sure, if we wanted to be modern and complete human beings, we could learn all about the latest fashions, and work to keep up with them. We could work to buy a new car every three years. Recently some wise guy, probably an aspie, took the time to add up all of the time that the average American spent on his car, counting driving it, washing it, working for the money for car payments, interest, insurance, gas and repairs. Then he took the number of miles driven and divided that by time spent. The average American zoomed along at four miles an hour. A lot of aspies just don't have the time, energy or attention for that kind of waste. Fashion sense, small talk, Hallmark holidays, sending bouquets of colorful, smelly plant genitalia and the other social niceties often get tossed into that same low-priority bin. A lot of that is a good and liberating thing. But another lot of it really hurts our ability to have friends and make a living.

The second form of negative entropy is stereotypy or stereotypical behavior. The saddest but most powerful image of this phenomenon is a tiger, bear or gorilla who is pacing a small cage in a zoo. Much of the animal's attention stays somewhat comfortably diverted, busy or occupied in an activity that holds no surprises. In many aspies this takes the form of repetitive motor mannerisms, the "hand or finger flapping or twisting, tics or complex whole-body movements" mentioned in DSM-IV. I am so very thankful to have failed to meet this "optional" diagnostic criterion. For that symptom I would medicate. More grossly, this can take the form of "apparently inflexible adherence to specific, nonfunctional routines or rituals" (*ib.*). More broadly still is the potentially much more productive "encompassing preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus", and, as also exemplifying attention-tunneling, a "persistent preoccupation with parts of objects". The

focus of attention becomes narrowed in repetitive or unsurprising behavior, either habitually or for extended periods of time, to ignore outside stimulus. There may be more to this strategy than one quickly assumes: attention can inhibit sensation at the organ of sense, not just within the brain. Back in experimental psychology we studied an experiment that monitored the signals that a cat's ear was sending to his brain. The background noise was a metronome. When a mouse was let into the room the ear stopped sending the metronome's rhythm. In other words, the cat's faculty of attention somehow inhibited the sensory signal at its source. Full engrossment then may do more than allow one to ignore stimuli. It may actually eliminate the neural activity.

The third strategy is fascination. This involves wanting to know everything about a particular subject, to own the whole vocabulary, including the Latin names, to eliminate all of the unknowns by solving the puzzle. Children with AS may strive to know everything about their topic of interest and this may be all that they talk about. They will pontificate long and formally on their topic, a habit that has earned the textbook AS kids the nickname of "little professors". The only point or conclusion they may come to is that there are no more surprises for now. They will not notice how bored their listeners are getting, or possibly even that their listeners left the room an hour ago. The first one of these that got me a school-wide reputation was my 8th grade paper on the solar system. It ran about 55 pages, which in 1962 was nearly everything known on the subject. And god, were the other kids bored when I had to read the whole thing; insensitive aspie kid or no, I still felt sorry for them. Obviously it is not often possible to know everything about everything. This is where aspies get the reputation for focusing on parts of systems or objects. Be certain, however, that if the system or object is of manageable size and complexity, they will not stop until they know the whole damned thing. In sixth grade I learned that I didn't have the stamina or the patience to learn the entire dictionary, but at one point I had the Z's down pat.

Aspies are known for their attention to detail, and an ability to notice things that others miss, but is a big error to assume that they are therefore limited to concentration on details with no interest in, knowledge of, or facility for the big picture, as is commonly inferred or stated explicitly in the literature on AS. This is a particularly false assumption for right-brain dominant aspies. The right brain integrates the details into systems and wholes - it is not just the brain that dimwitted "feeling" people who can't think logically will use. The right is a great brain for thinking. An aspie may as easily have a compelling interest in how whole systems work. A lot of aspies are systematizers. After all, the surprises don't end until they get the gestalt and its synergy. Didn't one of our many great poster boys, Albert Einstein, only plod through the narrow details and formulae throughout his life in search of the single, elegant Theory of Everything? It was for this reason that I tended to pick fields of interest where true human knowledge was the most limited and I could just ignore all the conjecture - like science, religion, psychology and politics. Just kidding: I tried to avoid the dangers of too narrow a specialization by obsessing on or specializing in knowledge-in-general, hoping for some inter-disciplinary integration at the end of the attention tunnel. That became correlative thought and consilience.

Aspies may throw nearly all of themselves into just a few areas of interest, and may show little but impatience with anything not assignable to these areas. The formal school experience for AS children, particularly the more gifted ones, will vary enormously with how the curricula synch with these limited interests. Until the middle of sixth grade I was pretty much invisible, hiding from both myself and the world, and kept a C average. It might not have even mattered what the curriculum was. I have almost no memory of a full tour in Cub Scouts. I recall little beyond my fascination with stamps and coins, normal sexual exploration with other children (and the trauma of getting caught), my Gilbert science kits and Erector set, and especially being too terrified to talk to the girls I had crushes on. Then in sixth grade something clicked and I never really got anything but A's after that. Within a year I had taught myself algebra. What kept me from getting bored then was a personal challenge to do the assignments and tests in a quarter to half of the allotted time and still shoot for perfect scores. That gave me lots of free time,

which I soon came to value highly. Thankfully I was able to sustain that through all but a couple of goof-off semesters in college, until I dropped out to quit wasting time and start studying in earnest (plus college was requiring me to live in a busy city).

One of the comorbidities frequently associated with AS is attention deficit hyperactivity disorder (or ADHD). I personally have a great deal of trouble imagining how difficult this must feel and cannot discuss the combination here with any first-hand understanding. For me, my own AS is the very opposite of ADHD - I can focus on the same thing for ten years, and a good eight to twelve hours without even looking up. It is said that there can be problems in AS with organizational and time management skills. Unless this is due to preoccupation, I don't have those, and wonder whether these might belong to other comorbidities. The intensity with which aspies are fascinated by their obsessive interests, or to put our own positive light on it, the passion with which we learn and create, simply rearranges the priorities. That dentist's appointment, it would seem, didn't really matter. Unfortunately, picking the kid up from school really did.

Nonverbal Communication

Normal or NT people, as social primates, possess a rich, intricate and very much inherited sense of the mental states of their fellow man. They can gather vast amounts of information about another person, his emotional state, his cognitive positions, his subtly shifting responses in mid-encounter, his reactions to incursions into his personal space, based solely upon clues that his senses provide. Some researchers claim that this represents as much as 90-93% of the information exchanged in a typical conversation. I won't say this because it's really stupid, and meaningless to quantitatively compare the contents of a verbally expressed equation with a gesture that says I'm not sure that I like you. Still, a person with deficits in these non-verbal skills is certain to miss much in an exchange and then to act accordingly with inferior input. Previously I suggested that afferent hypersensitivity and attention tunneling might deserve much of the blame for these deficits, but I am not claiming that this is the whole story. Other processes within the brain itself, particularly mirror neurons, might contribute much to this problem in the aspie. The inability to read what another person is subjectively experiencing is termed *mind-blindness*. Aspies who fail to respond or react to another person's body language with their own are often judged cold, unfriendly or unsympathetic, if not strange, shifty or dishonest, which frequently leads to their social rejection, failed socialization, lost opportunities and subsequent alienation.

Patterns of speech, aside from the lexical content of speech, will often provide as much of their own kind of information as the words that are spoken, including whether the words are truthful or believed by the speaker. This area of interpersonal communication tends to be one of the aspie's greatest deficits - on both the sending and the receiving ends. In speaking, the aspie will often exhibit noticeable difficulties with prosody, rhythm, timing, intonation, inflection, accent, pitch, modulation, color and volume. He might sound like he is reading from a book that bores him, but not enough to show contempt. His speech might seem flat, toneless, emotionless, unenthusiastic, monotone or monotonous, overly formal or pedantic. Sometimes the tones are a little livelier, but just "wrong" for the meaning intended, or the speech may sound manic or jerky. A native speaker might sound a little foreign. Signals sent by the listener, conveying information that these things being conveyed are confusing or boring, may go completely unnoticed. When speaking on the phone, it can be a great relief to know that body language and eye contact are no longer important, but tone of voice and clarity of speech become more important. Some of us are OK here - enough of the sensory overload is removed so that we don't need to tunnel, and then things like proper, spontaneous tone and inflection become possible.

In hearing, the aspie might miss a lot of inflection and nuance, such as that indicating sarcasm, scorn, or humor, and this often has social consequences. This may contribute to a common aspie trait of taking statements, idioms and other figures of speech more literally than they are intended, often with a comical effect that an aspie might eventually learn to play with. The accurate answer to the question "What's up?" is

"any radial vector drawn from a reference planet's centroid of mass". Such literal interpretation may also have a component in missing conceptualization skills, or a problem with perceiving the meanings of metaphors. I am thankful to be among the many aspies lacking in this deficit, but here we have another problem - our grasp of metaphor can be so idiosyncratic and subtle that very few NT's can see the analogy without having to think too hard. So it might sound to them like we're babbling nonsense when we may in fact be poetically astute.

Difficulty with making eye contact is usually among the first things cited in a description of AS symptoms. This problem does not stem from not wanting to make personal contact. As simply as I can put it, in terms of hypersensitivity and attention directly on novelty, eye contact is about the highest interpersonal voltage an aspie can experience. When you need to lighten the current load with attention tunneling, this is often the first thing to go. When there are other demanding undercurrents and layers involved in an exchange, such as trying to formulate and articulate deep and complex thoughts or trying to convince a stranger that she should come home with you and play consenting adults, you might as well just forget it. If I want a drink of water I might turn a garden hose on at a trickle and drink sideways from the stream. I don't stick the hose in my mouth and turn it on full. The latter is what eye contact feels like to an aspie. It fills you to capacity way too quickly. On the other hand, sometimes an aspie may try to overcompensate for this deficiency by forcing eye contact, along with his deficiency in reading clues about when to stop doing this. Then he just gives you this weird, stiff, creepy, crazy stare that makes you want to escape.

Facial expressions may often be plagued and distorted by extreme self-consciousness in the aspie. I already discussed some of the problems with smiling on cue under sensations above. This problem extends to all of the major expressions, including surprise, which by definition should be the most spontaneous of all. To the extent that aspies are aware of what their faces are doing, they may feel fake. And since aspies may need to learn and practice the facial expressions that come naturally and spontaneously to others, it may be natural to feel that this is artificial or phony, even when it might be this very self-consciousness that assists the aspie in being genuine. This is why he will often just give up trying to express himself with his face and do nothing to amplify or broadcast the expression of his internal states. People on the receiving end of this will just assume that his internal states aren't felt strongly enough to get broadcast. She just thinks that he's not attracted to girls, even though he's not gossiping, swishing around and using special names for colors and fabrics. Another problem with letting the expressions go is that micro-expressions still get sent unconsciously and these become a more important part of what gets read. So that if I'm trying to formulate a statement and I feel a hint of disgust - at myself - for failure to find the right words, the receiver reads only disgust and may feel that he is its object, since that's all he is given to go on.

Gestures and postures will usually present the same problems as the facial expressions. They can be too limited, conveying a withholding of information that arouses suspicion. They can be too artificially exaggerated, conveying a sense of mania or disconnectedness. A failure to point to or indicate objects under discussion will give the impression that the speaker is just dreaming solipsistically in his own head and that the receiver just isn't an important part of the exchange. Or they can be completely idiosyncratic, personally invented gestures that speak to others in alien tongues, or with the opposite meanings.

Proxemics, a person's sense of another's boundaries or personal space, is often diminished in the aspie. This can get even further complicated by cultural and racial differences in selecting appropriate distances. On top of this, boundary violations are usually signaled with "first warnings" from the offended party while the aspie remains unaware of these signals. Thus, an aspie may unknowingly get up in your grille or face. If you have a place in line but are holding up the line by being distracted, an aspie might just unapologetically walk right around you. Recognizing another person's territory also covers his place in a conversation and whether or not he has the floor or talking stick. An aspie might interrupt without having a clue that he is being rude. Some aspies, however,

have learned to take turns talking or even to shut up and listen, because how can you ever be a good know-it-all if you don't keep silent and take the new things in?

Beyond the verbal, other conversational skill deficits may include further nonverbal indications that the listener is only an unnecessary fixture in the speaker's monologue, even when these indications are incorrect. An aspie might ramble on, seemingly incoherently, headed towards no particular point or conclusion. Statements may be made completely out of context. Verbiage might seem totally uncensored. Irrelevant comments, difficult metaphors or odd word sequences may seem to come out of the blue. *Sequiturs* may be *non*. The poor listener may try to send all of the stock, subtle signals to indicate that he is bored, confused or offended, but the signals just aren't picked up; he may try to steer the conversation back to something of more mutual interest only to have his attempt ignored. Even when an aspie realizes that a conversation is broken, he may not have a clue how to fix it.

Tactlessness can take many forms, including being direct, honest and speaking your mind in good conscience. I find myself pointing out a person's logical flaws in terms of logical fallacies, like Mr. Spock, but I'm most inclined to do this when someone is being pretentious or blind to anything outside of a narrow tradition like academia. I might just up and tell someone, "Sorry, I don't do small talk", or ask, "Why are you gossiping like that? Don't you have your own life?" I might tell a woman that her new haircut makes her look like a guy with hormone problems. Polite society has a lot of rules, both written and not, about how to use little niceties in conversation, even if they are lies. Aspies may tend to ignore these as dishonest, or as a superfluous expenditure of energy and attention, and irrelevant to the lexical content of the conversation. We frequently have a hard time remembering that the point of conversation is the transfer of lexical meaning into another mind, which ultimately presumes some degree of receptivity, which is hugely facilitated by those lying and tedious niceties.

Social Interaction

Even though most aspies will describe themselves as introverted, this does not necessarily mean that they are socially reclusive like so many others on the autistic spectrum. An aspie may desire both friendship and romantic partnership as much as any neurotypical person. He may have learned across a lifetime of social challenges to be shy or reticent. He might have learned to be afraid of offending or frightening people and being rejected or ostracized. He may have learned how little candor and honesty are appreciated in a deluded society. He might merely have decided that he could learn more from people if he did more watching and listening than showing and telling. He may have learned rather misguidedly to weigh his sense of worth in terms of social acceptance and so may be plagued by self-esteem issues. He may be a loner, but an aspie is not inherently inaccessible and he has not inherited any misanthropy. He may have come the hard way to the truth of Krishnamurti's words, "It is no measure of health to be well-adjusted to a profoundly sick society".

One of the social problems many aspies encounter early in life is teasing or bullying. It is natural, if unfortunate, for primates to react to individual differences with suspicion or mistrust, and then to test the one with the differences against the measures of success for the group, in some expression of joust or duel. All it may take to trigger this is a bit of peculiar phrasing, an odd gesture or posture, or a timing glitch in response to a nonverbal cue. I am thankful to have had only a few of these encounters, but even these were memorable and traumatic and they left broad, long-term behavioral changes in their wake. I can sympathize with those who had it worse. Meanwhile, it is difficult to separate out these long-term behavioral changes, like social reticence, from the traits that are inherent in the syndrome. These changes bred by experience tend to converge, to be entrained in certain common and identifiable patterns. Do we even try to distinguish the traits an aspie would have even in a perfect world from those that he develops in the real world? I think we should at least identify them separately, when we know more. An aspie may be born with a trait to be naive, trusting, open, good-hearted and innocent, and many

can maintain this. But along come the bully, the liar and the thief and it all gets turned around into anger, bitterness and resentment.

Aspies usually aren't very good at confrontation and conflict management. These are much too intense, even for someone with the confidence and security conferred by a black belt or similar measures of competence. It may be perceived as a cost-benefit bargain to get humble and surrender all of the more dominant social roles and walk away, or carefully avoid all potential conflict. This may of course contribute to diminished social status, which in turn can diminish self-esteem. But then there's always the chance that the right people will notice what just happened and they can find a perceptive and sympathetic friend.

For various reasons, to an NT equipped with his array of nonverbal cues, an aspie may appear to be a less complete, less successful, less rounded example of his species. He might look too shy, wounded, tweaky, glitchy, damaged, nerdy, clumsy, embarrassed - any number of descriptions like this. There are many other responses or attitudes that normal people will have to these first impressions other than bullying and teasing. Sympathy at least will elicit some much-needed kindness, which might be sustained long enough to incubate a much-needed friendship based on something more than sympathy. The response I get the most is condescension or patronization, a thing that I am already over-sensitized to from having an arrogant, manipulative, condescending and patronizing father. My normal response is to invisibly shake my head and continue to get what I can from the encounter. I know that this fool who is telling me how and what to think has the sub-prime or two-digit IQ of a Christian Republican, and that's already a lot worse than I could possibly curse him. It's like being barked at but not bitten.

Of the traits that push an aspie out to the edge of society, the first one to appreciate is that it can quickly wear an aspie out to socialize. The wear and tear is neurological. He may be taking in too much information and be forced to select what he does take in with what seems like arbitrary criteria. He cannot process it all subliminally and it's too much to do consciously while looking all cool and smooth. Since it is novelty that most powerfully draws the brain's attention, the experience of meeting multiple strangers is often the most intense of all. It would be enough to see a new face or hear a new name and not have to remember much of anything else from a first encounter. But then there's that firm handshake and the eye contact and the job description and where they're from and their accessibility to intimacy and soon you're overwhelmed with input. It's rare when I'm able to leave an introduction with a person's name still held in my short-term memory, where it needs to be held for the long-term retention. When meeting them again, much of the time I'm either afraid I'll get their names wrong, or I will just blank on a name that I know, even those of old friends. I feel uncomfortable saying people's names, and I don't like hearing my own name either. We get tangled up like this. When we don't meet new people we don't get so tangled. I can always be found in the corner or halfway out the door.

Attention tunneling will require an aspie to sort out the many things that socialization has to offer for their practical values, or more precisely, according to some kind of cost-benefit analysis. Some of the first things to go, then, will be the behaviors that consume very large amounts of time and energy in exchange for what the aspie perceives are rewards of little relative benefit. Most notably, these are things like status-seeking behaviors, the acquisition of status symbols, or approval-seeking behaviors, the camaraderie of fans of fads, the cordiality of small talk, the mindless social engagement of gossip, the trappings of fashion and makeup. Of course, along with the status- and approval-seeking behavior go the status and approval themselves. To the extent that these are genuine psychological needs for a social primate, it would obviously be best to have some substitutes handy. Many of us aspies don't even think of this until it's too late and we develop psychologically with deformed and missing parts, with a sort of rickets of the psyche.

Solitariness, or an intense interest in the non-social and natural environment, or a preference for the company of animals, or of much younger or older people - these are not necessarily a reaction to a lack of success among one's peers. Nor are they less

interactive from the point of view of the aspie - that rock really does have something to tell him. An interest in the non-human world is rewarded too, and with a lot less hassle and pain. A person's "failure to develop peer relationships appropriate to developmental level" is a big part of the AS diagnosis. There is a bit of value-bias or static charge in the word *failure*, of course. It would be better to first learn whether the individual in question even wants peer relationships (deep down and genuinely) and if so, how few really good ones would meet his real needs. That last one is the best question to ask.

When I want or need to make a new friend, or find a new intimate partner, especially from a non-specific sea of possibility, such as one might encounter when moving to a new community, I have just about all of the aspie's deficits at my disposal. I have a narrow range of interests. I don't have the book of niceties. I can't get excited by or do small talk. What comes naturally to others I have to learn. A lot of this social stuff, like subtexts, I have to have pointed out to me. I can't use my useless face to deliberately show my desires. I'm not that driven to express myself, or else I think that the effort spent on self-expression will not be well-spent on effect. Although I have no interest in conformity, I still seem to like being invisible and under the radar. When I do get up the nerve to approach other people I worry about saying and doing inappropriate things. The things I'm best equipped to talk about are obscure and esoteric realms of ancient or scientific knowledge. Even when I like someone I send inferior signals that tell them that I probably don't. Even when I'm half insane with desire, the twisted up signal she gets from my body language is that maybe I'd rather that she were a he. Normally it wouldn't occur to me to wonder what others think. Most of the things that humankind dwells on and chases fail to stir any interest in me at all. But I'm new here now and I'm lonely. What to do? All I can think of in response to that is: to offer my best contribution. Do a thing *pro bono*. And hope without hoping that someone will notice.

Self-consciousness, more than simple shyness, just adds to an aspie's attention overload. It's enough to go out in public and sort through a big surge of novel stimulation. To then have to pay attention to yourself and run multiple point-of-view simulations of how you appear from the outside too? No thank you - I won't be going out there on the dance floor in order to feel good, or be joining the ball team either.

With all of these socialization challenges it's not surprising that so many aspies are eventually left to themselves, or choose to stay alone, to develop their own ideas, opinions, thoughts, philosophies, perspectives, religions, points of view and inventions. They have relative freedom from peer pressure and the forces that press to consensus - and just an opportunity to create is often as powerful as a creative force. To the extent that these creative projects hold the interest and can return worthwhile rewards they can function as substitutes for the fulfillment of some of the social needs.

Eros and sexuality form a distinct subset of social relationships. I'm afraid that this important topic is still much understudied. The polls and surveys that I've run across are too small and drawn from too narrow a field to be statistically significant. There is a great deal of anecdotal data available on assorted aspie internet forums, but nothing to help build a comprehensive, working hypothesis. There is some data at the Aspie-Quiz site. One book, *Asperger's Syndrome and Sexuality*, by Isabelle Henault and Tony Attwood, has some good anecdotal information, probably useful for therapy, and draws some inferences from a small survey of 28 respondents, but it isn't a comprehensive study of the sexuality issues inherent in AS, as these may express themselves in statistically significant numbers.

I posted a poll question on Wrong Planet, knowing that the results would not be those of a good scientific study, but wanting to see if there might be any general trends or statistical bumps worth investigating further. The poll was titled "Sexuality Poll, Asperger's Only", and the question was: "What is your sexual preference and how strong is your desire?" The choices had to be fairly limited and one dimensional, but I wanted to avoid the extreme one-dimensionality of Kinsey's 0-6 hetero- to homosexual scale. The first 168 responses distributed thus:

Heterosexual, strong libido	27%
Heterosexual, modest libido	26%
Homosexual, strong libido	3%
Homosexual, modest libido	4%
Bisexual, strong libido	8%
Bisexual, modest libido	7%
Wanker, strong libido	1%
Wanker, modest libido	5%
I'm asexual	16%

Of course, many difficulties with the format's limited categories were immediately obvious. A more serious study would chart more dimensions, against both biological gender and gender identity. It would have a larger sample and an equal-sized control group of NT's. I don't think it was a problem to assume that the self-assessment of preferences could reliably determine what an incidental, post-adolescent, homosexual encounter really meant to a person's identity in the long term, which renders Kinsey's elaborate scale unnecessary. I could have included the words polymorphous-erotic and pansexual in the bisexual category, or created a whole new category for: "If it moves, fondle it". I might have added a "weak libido" choice to all but the "asexual" option, which a few respondents complained about. I might have added the M, N or F fantasy direction to the autoerotic or wanker category. And I just assumed instead of stating that a fondness for doggies, donkeys and sheep (oh my) would be subsumed under wanker. Asexuality as a valid gender preference has not been adequately studied. I could perhaps have made it explicit that asexuality is not the same as abstention or celibacy, although it might sometimes be the same as having given up all pursuit. Kinsey labeled those with "no socio-sexual contacts or reactions" as off-scale, placed in "Category X," and he put their prevalence at 1.5%. That's too low. Bisexuality as a gender preference has often been suggested to run between 1.5% and 8% for a human norm, but it will show higher numbers when given social or cultural acceptance, as it was in ancient Greece.

I didn't see anything to suggest that any trend was common to all aspies. The ratio of hetero- to homosexual looks much like a normal distribution. Overall, a better survey in the future would take a harder look at the role of any sensory and tactile defensiveness and aversion that is associated with "intense world syndrome" in the formation of preferences, especially including asexuality. But hypersensitivity or reactivity could complicate the sex life of even the randiest or most libidinous of heterosexuals. There is a very slight weighting towards "strong libido" in the poll, which, if this proved to be real, could be related to *in utero* testosterone exposure. There are a couple of statistical bumps indicating a greater than average prevalence of both bisexuality and asexuality. Bisexuality also could be related to higher levels of *in utero* testosterone exposure, but without the accompanying low levels of estrogen exposure that would tend to contribute to any homosexuality epigenetics. Bisexuality prevalence could also be elevated for social reasons, since the aspie has more limited options for intimate interpersonal bonding, and may have been trained by experience to better appreciate diversity in human affairs, without regard for cultural taboo, or to love the person first and its nerve endings and genitals second. With asexuality there is no way to tell yet whether its frequency of occurrence with AS was due to epigenetics and effects on the endocrine system, creating an erotic anhedonia, or was psychological and a consequence of frustration, or was sensory and a consequence of tactile defensiveness, or some more complicated mix of the above. We don't think that aspies have religious cults but there may be inclinations to attempt transcending the flesh.

The various aspie internet forums are full of sad tales of prolonged or chronic virginity and involuntary celibacy, lifetimes of frustration and wanking. These seem to be good, kind and thoughtful sounding people too - just great gifts in unattractive or ineffective wrappers. There are also a lot of accounts by people who cannot tolerate being touched, which to me is equally sad. My own experience with Eros and sexuality has on

balance been very positive. I am heterosexual with a strong libido, and with fairly normal (or at least only slightly broad) wishes and preferences that all stop well shy of pain and degradation. I have always been loyally monogamous but due to difficulties in making relationships last (with the blame to be fairly shared) my monogamy has always been serial and not the permanent relationship that I still hope to find. I have had at least a dozen live-in relationships that lasted the better part of a year or more, including two marriages. The briefer and one-night affairs were a dozen times more numerous than that. Looking back I don't have a clue how this happened and, I'll venture a guess, neither do they.

I don't know if this is an aspie phenomenon, but it could well be: during the act I have never once fantasized about being with anyone else, or doing anything other than what we were doing. It was always enough to be fully present. Another thing very possibly related to AS, and this is embarrassing to talk about, knowing that I am probably one of the few people who has ever practiced Mahasturbhata Yoga, or autoeroticism, and we know that you certainly haven't: I have never been the slightest bit aroused by hard-core pornography, or by photographs of men and women together. This may not be the case for bisexual aspies. For a heterosexual, I suspect that this may be due to diminished mirror neuron activity. Mirror neurons allow us to imagine being the person we are perceiving and copy, first in our imagination, their experiences, their mental states and perceptions, especially proprioceptive and kinesthetic. It's the monkey-see-monkey-do neuron. If these are less functional in me, the vicarious thrill doesn't occur and I have no reason to have another man anywhere near my fantasies. Soft-core porn, the simpler, less roundabout, more straightforward fantasy has been another matter entirely, and I became quite a connoisseur of this variety. It displaced stamp and coin collecting as soon as I hit puberty. But I invariably disappointed myself when doing this kind of photography with models - the photos always came out looking way too much like art. Now someone is sure to be bitching about soft-core being degrading to women. The woman in the photo is being told, usually truthfully, how damned hot and tasty she is, and she's getting paid more than I'll ever see for her hour of work. She is helping me to fantasize, harmlessly I think, that I have a woman here who really wants me, one who isn't complaining, or correcting me, or demanding that I buy her a bunch of stuff she doesn't need. Am I then degrading her or thinking less of her? Hell no - I'm worshipping her.

For me Eros and sexuality have always been the primary gateway to intimacy, the other nonverbal communication routes being pretty much closed off. But I include just cuddling here, and massage. Of course there is still shared experience, the long walks along the river and beach, the rafting and camping trips, counting stars, dining and movies and all of that good stuff. But nothing really bonds us together like a good shot of oxytocin on a regular basis. Of course there are other secrets and mysteries for making a relationship last a lifetime, to which I am not apparently an initiate. I haven't yet had the chance to attempt an intimate relationship with the knowledge that I am an aspie and having the ability to account for my deficits. Still, I have always known sensual touch to be a form of nonverbal communication, a language that is learnable, and one which an aspie can learn as well as any NT - perhaps better, in the same way that the blind will learn to listen so well.

Naturally a big problem to work on in establishing an intimate relationship will be developing clear communication of desires and needs with an agreed upon language of signals, to take the place of the natural, nonverbal cues that are likely deficient in the aspie partner. With problems in both the sending and receiving of nonverbal clues, neither partner will have much luck just dropping subtle hints about what they want to experience, or about what they dislike, which can be even trickier. In the end at least, once this becomes second nature, making these signals more explicit should feel no more contrived than learning to play a fine violin properly, and then coaxing or teasing the most sonorous, dulcet and mellifluous sounds out of her.

Of course the biggest problem, period, is in getting a relationship started in the first place. Sometimes this is only a matter of getting past the initial awkwardness and that discouraging notion that many of the important assessments are made in the first

seven seconds, when the aspie is looking the most like a total fool. If there is a real physical attraction between an aspie and someone else he will need give off and read at least a few correct signals, unless some of his other traits are irresistibly attractive. The simplest rules of thumb to go by are: a) open gestures and gestures that are turned towards someone tend to mean attraction whereas closed gestures and gestures which are turned away tend to mean avoidance and b) when someone is even abstractly copying another's movements and gestures and this happens a couple of times they are usually communicating an interest in growing closer. Any rules that an aspie could follow would have to be laid out this simply, and then turned into even shorter mnemonics. Otherwise he will just get confused.

Moving on, relationships with pets for aspies are probably best treated as a subset of social interaction topics, since for many this becomes a less demanding substitute for human interaction. I have not, however, seen any studies comparing the relative frequency and intensity of AS v NT in bonding with animals. Aspie forums can be full of praise for pets. I personally have a number of difficulties with them. I wouldn't mind having one who was my superior, like a young dragon, or Flipper. I like maybe one dog in ten, and these are usually the ones who don't bark, or rush towards me, or smell bad or slobber. They aren't the toady, servile, sycophant dogs, but carry themselves with some dignity. They wouldn't think or dare to chase the deer from my yard. They would leave the skunks and porcupines alone. And the raccoons, badgers, lions and bears too. But I guess I'm just as picky about my human friends, even if some of their dogs have some of these traits. My last pet was a ferret, but it turned out it was a heart condition, not my company, that made him so mellow. I've also had geese and ducks and chickens and lots of goats and millions of bees. Cats come and go, but these days they don't come inside. I don't really mind them chowing down on the fast-breeding mice but I will be really mean to any cat I catch killing a songbird. I do have a lot of affection at a distance for wild animals, except maybe hyenas. In sum, I don't really get aspies and pets and will have to leave the attraction for somebody else to explain. I'm guessing it's either some kind of therapeutic thing or some kind of superiority thing.

Career development and economic survival skills will fit somewhere between social interaction and cognitive skills, so I'm discussing them here as a transition to the next section. Clearly the optimum solution is for an aspie to find a special interest that coincides with a socially or economically useful task and then occupy a position that demands only those social skills that he is capable of acquiring, while asking him to exercise the cognitive skills at which he excels. It's good to have at least a little challenge to grow socially, and that's about the only area of professional therapy currently available to the aspie.

Certain vocations are inherently difficult, such as jobs that require charm, persuasion, timing, rapport, social finesse and happy faces all of the time. Aspies don't necessarily need to be hidden away in a back room, but being out in public, moving the opinions of strangers around, is not their forté. Sales is usually not a good idea. In college as a kid the only job around was driving an ice cream truck, which took me as close to the edge of real-deal insanity as I ever got. I still hear the nee nee ner nee nah nee no no nah nee no no nah nee ner. After failing miserably at supplementing that with selling Shaklee door-to-door, I quit it all with a bit of performance art. I went to a nearby cattle yard and purchased 60 lbs of honest-to-god bullshit, bagged that into one-ounce bags that looked suspiciously like cheap reefer, no labels, and went door to door selling my "guaranteed worthless" product. At least there I did quite well for a few days, until I had to quit because my sides were splitting from laughing with those who were able to laugh. But at least there were no fake smiles required.

Clearly the aspie should play to his strengths if he cannot be content with mundane, menial and mediocre work, and many aspies have an extremely low tolerance and motivation for this. Normally his greatest strengths include attention to detail, focused interests and sustained effort. He will not want many surprises, or quick changes of direction, or endless major revisions to the work. An aspie's talent for obsession, when turned into focus, and compulsion, when turned into drive, can lead to the development

of impressive abilities. Then it becomes a simple question of whether he can adapt his interests to something productive. There may be some big exceptions to this with the ADHD comorbidity, which seems to be fairly common. The perfect job should also not require that the aspie take an enthusiastic interest in his peers, or at least in the kind of things that they like to care about. Aspies tend to regard the things that interest the common man as unimportant, so it may be a bad idea to ask him to pretend that they are. Obviously many of us are very well suited to careers involving systematic thinking, objective criteria, logical sequences, the manipulation and integration of parts of wholes, and numbers, particularly as seen in such fields as engineering, science and technology. I would not rule out aspies in the social sciences either, particularly in areas of generalization and theory making. They may have a handy distance from and perspective on the local cultural or social consensus that blinds many others to more general human traits and characteristics.

The need to protect myself from social and sensory overload has severely limited the effort I've been able to put into making a living. This in turn has required that I simplify my material life, which has given me a lot of free time for labors of love. What was left has been a fairly satisfying career. I think that this suggests letting the necessities shape the development of a vocation. That of course won't work for normal 9 to 5 jobs, which limits the options a lot. I've had to generally limit myself to intermittent, part-time, contract labor and life without much of a security net.

I personally like a big right-brained component to my work. It is an error to assume that most aspies have difficulties with big-picture perspectives, especially when they have a facility for grasping systems and a knack for correlative thought. I do mostly custom residential architecture, land use planning and community design for maybe eight hours or less average per week. Both of these challenge the right brain because you have to integrate hundreds of things all at once. Ducts need to work with lighting systems; trees have to work with free water and roads. The biggest aspie problem with architecture is reading the clients correctly and keeping them happy (after meeting them for the first time, that is). If the clients are indecisive, then constant revisions may take a big toll on the attitude. The biggest problem with land planning is presenting your visionary ideas as a supplicant to the public boards and planning commissions, and keeping patience with these senseless idiots who have been given powers over reason so disproportionate to their mental abilities. And don't get me started on the passive-aggressive, petty bureaucrats. That rage gets murderous.

Since successful social integration is not the most promising source of praise, esteem, respect and encouragement, many aspies may simply seek their praise and approval for a job well-done as a substitute, relying on objective criteria. As such, they may be driven to extraordinary performance. That is of course second best to learning to not need this to feel good about yourself, but how many of us are good at that? Besides, getting really good at something lets you buy cool luxuries like food, shelter and toilet paper.

Language and Cognitive Skills

AS is quite specifically described or defined in DSM-IV as having "no clinically significant delay in [language or] cognitive development or in the development of age-appropriate self-help skills, adaptive behavior (other than in social interaction), and curiosity about the environment in childhood". The phrase "no delay" tends to gloss over the relatively high percentage of aspies who develop cognitively at accelerated rates and an abnormal percentage of those who can be described as gifted. Furthermore, "no delay" implies that there is some kind of normal mode of development for even abnormal people to proceed through. It should not be allowed to imply that these developments would not be abnormal or idiosyncratic in the differently wired.

Aspies do not tend to show delays in language acquisition, and they may develop an unusually sophisticated vocabulary at a young age, especially in their fields of interest. Sometimes they have difficulties with figurative language and metaphor and may tend to take these expressions literally. Such literalness can have social consequences, as when a

playful statement is taken as an insult, or an insult is taken as playful. But I did not have those problems and have felt quite at home with symbol and metaphor all my life. Young aspies may be very creative in their use of language, playing with new combinations of words, flipping things around, standing old sayings on their heads, coining new words, and juxtaposing words from different contexts.

Humor is something of a mixed bag for aspies. They may be at a disadvantage when this requires a sense of timing, nuance, tone of voice or other forms of nonverbal communication. This goes for both sending and receiving the chuckles. At the same time, they can develop rare gifts for humor, particularly when this is most dependent on linguistic or lexical content, like puns, wordplay and satire. Their tendency to social isolation and a culturally disengaged perspective may give them an ability to jump around between contexts and frames of reference that is at the core of much humor. This distance may also heighten a sense of irony. They may also learn to play with their tendency to take things literally and point out the silliness of common expression and modes of thought. Having a flat tone in one's speech can be especially suited to sarcasm and dry wit. On the other hand, the construction of their humor can be so subtle, or their words, concepts, allusions, metaphors and allegories so obtuse and idiosyncratic that their humor just goes right over everybody else's head. I've only paid attention to the subtler, higher forms of humor and haven't seen enough to comment on low humor, insult comedy and *schadenfreude*, other than to say I find it generally offensive and walk away from it when given the chance.

My own language developed quickly at first, then slowed during my invisible period, and then took off again in 6th grade. I still don't understand the dim period, but it wasn't abuse. We brothers had all of our necessities met, except affection and respect. I think I was trying to find conformity, or was resting up for the future. Anyway, I picked up Latin fairly easily during three years in high school and more recently learned classical Chinese, both of these in the narrow-but-deep mode, with the vocabulary words explored in all of their subtle nuances and mysteries, rather than simply, with assigned English and experiential equivalents. I'm sure that with just a little more study I could also do lots better than my current limping along in Greek and Hebrew. And, see my website, I've brought this linguistic facility to a number of forms of correlative thought. This is why I was totally surprised when I recently found myself confounded and perplexed when attempting to learn conversational Portuguese. I had plenty of motivation to learn it, and friends who were fluent, both in the US and in Brasil. For years now there has been a strictly orally transmitted doctrine that I've wanted to learn. So what was the difference? The other languages were in effect dead, or at least unspoken in my world. But now I had to pay attention to somebody's voice, and all of the nonverbal cues that went along with it. Then I had to figure the meaning out, without reference to spelling or writing. Then I had to respond in kind. I was completely intimidated. I did a lot better with the instructional CD's, but all of that flew right out of my head the minute a real person started to speak. It was just overwhelming - these folks were just as nice and friendly as people can be, but it felt like they were getting up in my face and yelling at me whenever they spoke directly to me. And then I resented their failure to slow down and enunciate. Eventually I just gave up trying and redoubled my dead language studies.

A strong desire to seek or collect knowledge is common with AS, often with an overall goal of some comprehensive truth or perfection, wrapping the subject up completely, or getting one's head the whole way around it. Verbal and intellectual performance will tend to outrun the practical. Nonfiction will likely be favored over fiction, unless or until a sci-fi obsession takes over. Information itself seems to be the goal, whether it is potentially valuable or merely accurate, more than having a reconstituted or vicarious experience. I personally like fiction, but there is just too much else out there to be learned. Precision or accuracy in learning may outrun comprehension as well. These tendencies somehow seem to reflect a longer purpose, or a greater than normal inclination to defer gratification, which will come later, when of the pieces are all in their proper places. I'm not sure if this is more patience or persistence, but things might get done over until they are done correctly.

Young aspies tend to develop a keen interest in systems, or how things work. There is a paradox here with the "parts-of-the-whole" orientation that is seen more often in AS literature. Again, the whole is most often ignored for the sake of its parts when the whole system to be learned is overwhelming in its scope. Young aspies, accordingly, often develop a fascination with patterns, plans, shapes, lists, tables and matrices - things with the whole and all of its details all on one page and seen at a glance. I went nuts when I first saw the Periodic Table, but its asymmetries disturbed me deeply. These things are like little worlds all to themselves, just made for wandering around in, with no variables or disturbances. This inclination does not bode well for learning a lot of odd, disconnected, messy, variable, random, trivial and miscellaneous things unless there is some glimmer of hope for making it all make sense in the end.

Creativity, innovation or inventiveness can be another strong aspie trait for a few reasons. The aspie becomes habituated to life at the edge of society and may spend a great deal of his time observing and pondering the non-human, physical and natural worlds while most of his fellow man is almost completely bound up in the consensual cultural or social reality, the stream of ephemeral fashions and trends and the cultural memes *du jour*. It is relatively easy, therefore, for him to think outside of the box, because he lives there. Also, the aspie tends to have an eye for order, symmetry and perfection. It is easy for him to get the notion of elegance as a major contributor to the proof of a theorem. The great mass of humanity is satisfied with a great deal more imperfection, such as an alphabet arranged in no meaningful order or inconsistent rules of spelling in a language. Or look at Americans' refusal to pick up the metric system. These imperfect things will glare and yell at the aspie. For him the exceptions demolish the rule. And so he is often the first to create a new system or a better way for a future world, like Esperanto, or the International Phonetic Alphabet. The creative possibilities opened up by consilience, interdisciplinary thinking and movement between frames of reference will tend to depend on which frames the aspie has immersed himself in or made his own. Correlative thought, or reasoning from extended analogy, is not always present with AS, especially the left-brainers, but when it is, the creative new connections will be made with some authority.

Feeling and empathy belong in this section, as modes of cognition, or ways to be aware of the inner and the social worlds respectively. Here the diagnostic criterion "lack of social or emotional reciprocity" says a little more than the more commonly proffered "lack of empathy" and "mind-blindness". It is often too quickly assumed that the aspie is just too self-involved to relate, not interested in another's reality or the contents of minds not his own, if such things and other worlds even exist. Of course, this is often true. But it's also true that NT's will just as often fail to really give a damn about another's thoughts and feelings and will only politely fake their sympathy. Sometimes the aspie's failure at "empathy" is only failure at being a fake.

The first of the big problems with reciprocity is that the aspie may be unable to read the clues to the other's mental state unless they can be articulated in words as well. Then, even if he gets it and does respond, he may send weak or distorted signals back and so be unable to convey that he is feeling the feelings that are expected of him, even if he is. He must be cut off if he doesn't feel what he's supposed to feel. But a limited vocabulary for the expression of emotions is not the same as a limited range of emotions. I think this lack of a nonverbal facility for reciprocity or synchronization is one reason why I enjoyed being an FM radio deejay so much. I felt like I was enabling a shared emotional state that was synchronized by the music I played.

The second big reciprocity problem is that an aspie's attention tunneling has allowed him to judge an enormous array of thoughts and feelings as unaffordable pursuant to his own cost-benefit analysis, things not worth having because they bring him fatigue instead of energy. It is true that an aspie may be inclined to react to feelings with thought. I do not mean to assert here that a disconnection from feelings and emotions, even those concerned solely with self, is not a common occurrence with AS. This shutdown does happen often, and as a direct result of AS attention allocation. But this should not be assumed to be a necessary part of the aspie's profile. When I encounter

someone who is suffering emotionally, I will usually first set my mind to work intellectually in search of a solution to their problem, rather than synching up and commiserating with them emotionally. And of course intellectually, if I perceive that the state of mind that occupies them is an inferior choice from among many optional states of mind, I might just tell them so in so many words. This is the small stuff not to be sweated. But I am usually feeling something, if not the same thing, and that something is frequently the result of a genuine concern for what he is going through. But we can also judge that person to be not worth the effort.

I am, as you might somehow have guessed, a thinker. Sometimes I don't react immediately, but I will think things over and through, and then decide on the best reaction - not a reflex, but still a response. The feelers, not knowing any better, and unable to think these things through, tend to think, as it were, that thinkers are numb and out of touch with their hearts. But I do get clues now and then that not only am I not numb, I may in fact feel a lot more deeply than most NT's. I may be talking with one of these feeler types and I'll describe what it feels like to lay down when I'm really tired and how this feels so unbearably, impossibly good that I start giggling to myself at the thought of going to sleep. They haven't ever felt that - that's just odd. Sneezing may do nothing more than annoy them, instead of bringing the joy it brings to me. It's not every day, but perhaps daily on average, I will leak at least a couple of tears just because I'm really grateful to be alive, even though I don't have a deity to be grateful to. And don't get me started on movies and beautiful music. I almost never cry because I feel sorry for myself, but I sometimes do over what humans are doing to each other and to the environment, just like that old litter-hating Indian guy on that old TV ad. I simply do not believe that thought and feeling are mutually exclusive. Like Meister Eckhart claimed, things of the world do not occupy the same place, but things of the spirit live inside of each other. It's true that I may not have the same feelings as the NT whom I'm supposed to be empathizing or synching up with, but who is to say that what I'm feeling instead isn't the one that he should be having? Maybe then his emotions wouldn't be disturbing him so much.

Temperaments and Preferences

The aptly named online autism and aspie forum, “HYPERLINK <http://www.wrongplanet.net/>“WrongPlanet.net” will occasionally host opinion polls for the membership. Since the samples are small, and the questions can be ill-crafted, and there is no careful protocol for selecting respondents, these cannot be considered scientific. But they often suggest areas where further investigation might well be warranted. The following responses charted Myers-Briggs Type Indicator (MBTI) assessments for 179 members. The typing occurs along four personality axes or dichotomies: Extroversion v Introversion, Sensing v iNtutiton, Thinking v Feeling, Judging v Perceiving. I have omitted the eight sets of results for the 7% of aspies who regarded themselves E or extroverts.

AS		NT
27%	INTJ	2.1%
22%	INTP	3.3%
15%	ISTJ	11.6%
10%	INFJ	1.5%
6%	INFP	4.4%
6%	ISTP	5.4%
2%	ISFJ	13.8%
1%	ISFP	8.8%
93%	Introvert	56.3%
65%	Introvert-Intuitive	11.3%
49%	INT	5.4%

As you can see, nearly half of the respondents regarded themselves as Introverted Intuitive Thinkers, as are most contrasted with Extroverted Sensing Feelers. I am an INTJ. The existence of these forums does not mean, however, that we can be popular there and make a lot of new friends by hanging out. It's mainly a bunch of weird, oddball, or snappish people with troubled personalities. You probably think I'm kidding. The victims! The whining! There is good information there, though.

Introversion with AS is not the extreme withdrawal from the world that is found in some of the other realms of the autism spectrum. The need to limit their experiences, along with poor social skills and narrow personal interests, just leaves aspies with difficulties in approaching other people and in finding common ground. When they do approach other people they may make them uncomfortable with behavior that the normal, inherited, human-primate neuroconstitution perceives as odd, suspicious or offensive. They will fail to synch up emotionally. They are easily overwhelmed by novelty, and what is more novel than social spontaneity? They have made their keen interests their own, but will remain stubbornly unaware that their enthusiasms may not be shared. Even when they are reticent to begin with, they may completely ignore a fairly explicit message to "please just shut up and go away".

Politically, aspies will lean liberal, libertarian or independent (46, 19 and 11% in a poll of only 84 respondents). Much of the little conservatism remaining may reflect either a discomfort with novelty and innovation or a misguided belief that politically conservative elements somehow tend to respect the rights and choices of individuals. A better political assessment, however, would assess attitudes along multiple axes. Left vs. right has a place, but so does autonomy vs. authority and that would be a better measure for aspies.

Religiously, aspies seem to lean away from conformity and social consensus (in another Wrong Planet poll with 102 respondents, agnostic, atheist and other were 24, 22 and 17% respectively, or 63% total, while only 23% called themselves Christians). I would attribute this to be at least partially the result of a weak flocking or herding instinct.

Evolution

The following list of "Asperger's sufferers" is quite controversial because most of the people on the list had died long before there was any such diagnosis, and any conjecture that these people had the "disorder" is based purely on anecdotal reports and writings that they left behind. Even some of the living examples are only suspected of having AS traits. Furthermore, it is entirely possible for a person with the kind of drive and gifts typified in this list to be utterly inept socially without having a trace of autism. Nevertheless, it can at least be said that many of these people exhibit or exhibited striking aspie traits and that naming them can shed some light on the potential of Asperger's when considered positively as a skill set. Among scientists and inventors - Charles Darwin, Albert Einstein, Isaac Newton, Richard Borchers, James Clerk Maxwell, Carl Sagan, Galileo, Alan Turing, Leonardo da Vinci, Thomas Edison, Alexander Graham Bell, Benjamin Franklin, Nikola Tesla, Marie Curie, Henry Ford, Howard Hughes, Bill Gates, Aristotle and Paul Dirac. Among writers - Mark Twain, James Joyce, Lewis Carroll, Arthur Conan Doyle, William Butler Yeats, Hans Christian Andersen, Isaac Asimov, Edgar Allan Poe, Ursula LeGuin, Franz Kafka, Jane Austen, Garrison Keillor, H. P. Lovecraft, Herman Melville, W. B. Yeats, George Orwell, William Shakespeare, Jonathan Swift, George Bernard Shaw and Emily Dickinson. Among artists and entertainers - Vincent Van Gogh, Andy Warhol, Michelangelo, Pablo Picasso, M.C. Escher, Wolfgang Mozart, David Byrne, Bob Dylan, Erik Satie, Gustav Mahler, Richard Strauss, Stanley Kubrick, Alfred Hitchcock, Woody Allen, Steven Spielberg, Gene Roddenberry, Orson Welles, Jim Henson, Satoshi Tajiri, Charles Schulz, Tim Burton and Andy Kaufman. Among philosophers - Friedrich Nietzsche, Laozi, Diogenes the Cynic, Immanuel Kant, Jeremy Bentham, A.J. Ayer, Baruch Spinoza, Bertrand Russell, Ludwig Wittgenstein, Henry David Thoreau, Thomas Jefferson, Simone Weil, Ayn Rand, Carl Jung, Alfred Kinsey and Margaret Mead. It should be obvious from this list that there are other

reasons for AS being something of a "diagnosis *du jour*" besides it's recent induction into DSM-IV. It's one hell of a club to belong to.

So, why not use the best of these people as aspie heroes? Are we going to draw our encouragement instead from the praise that we get for conforming to neurotypical social norms and success at those alien games? Can aspies not get some benefit of the doubt by pointing to success stories? Are aspies specifically forbidden the use of brand recognition? I am thankful to have something that takes some of the sting and stigma from our weirdness, although even without this I am not nearly as embarrassed to be an aspie as I am about taking thirteen years to pick up on the AS diagnosis. Of course I might want to distance myself a little from some of the more unpopular aspies, like Bobby Fischer, or much worse, Theodore Kaczynski and Jeffrey Dahmer. This is, after all, still a social disorder. Thankfully we don't often partake in evil - it's just too damned intense and besides we tend to be conflict averse.

If even half of the above associations are accurate, then clearly neither human culture nor human civilization would be the same without this disorder. This has led some to speculate, misguidedly, whether the genetic susceptibility to this disorder might not represent some sort of evolutionary step instead of a disease. But evolution doesn't work at all in this way - it proceeds blindly, not purposefully forward, by diversification, and any advances that are made are normally accidents from going sideways. Furthermore, humanity would have an unbearably dysfunctional society were it constituted with anything more than a small percentage of aspies. Even the idea of a tribe-sized grouping of Aspies is a bit weird and creepy, sort of like an anarchy organization. And this reaction suggests another approach to the question of evolution. It is fallacious to ask of evolution the why of something's appearance or its creation, at least to anyone with any sense or scientific rigor. And yet it is quite legitimate scientifically to inquire into the why of something's persistence after it has occurred. Why is this peculiar phenomenon maintained in the gene pool - and specifically, at its particular low rate of occurrence? Might it confer, like sickle cell anemia, some occasionally useful advantage to the gene pool that carries these traits? Does AS confer behavioral traits that can be advantageous to the survival of a group while in some reciprocal way conferring fitness on the individual along with the debilitating challenges it brings?

I mentioned above that any differences in racial prevalence might be due to severe environmental pressures (particularly climatic and bound to life in an ice-age north), thus to an occasional extraordinary utility of innovative problem solving or thinking outside of the cultural box. An alien or outsider's point of view, a marked distance from any local cultural mindset, is certainly one of the most consistent of aspie characteristics. So is the stubborn, obsessive and focused persistence needed to get difficult problems solved. This outsider's perspective may be part neurological and part the result of a personal history of many socially alienating experiences and disappointments. Whatever the components, a fresh and usually harsh look at what the silly humans are doing now is just about guaranteed by asking an aspie. When the fresh or harsh look is necessary for the survival of the tribe, it helps to have that difference guaranteed by hard wiring instead of poetic inspiration and cultural persuasion. Such an outsider will tend to live at the very edge of the culturally driven consensual reality, or at least within a day's walk of the village, perhaps talking to himself in some cave. Fortunately, most societies have at least a little room for people like this, and good reasons to tolerate them, even if those reasons are but dimly perceived by the people. Their types are to be found in a handful of archetypal roles in the tribe: storytellers, inventors, scouts, jesters, shamans, etc., questioners of authority all. You want at least one lemming to shout to the others - "Hey, don't go that way you fools!" if only with enough success to keep a handful of rebreeders alive while the others leap to their doom. I'll bet that the flesh and blood Cassandra of Troy was an aspie. Invention has played key roles in human survival, particularly in times of lethal environmental stress, and this usually requires a mind not set in old ways but free from the bonds of conformity to roam about and put old things together in new ways, to make things out of antler rather than stone, to find a better way to throw a spear. Early language

and stories got the tribes and their cultures through tens and hundreds of thousands of years before we figured out paper. Aspies just seem made to do jobs like this.

Given the above, it seems that the gene pool of a population is well-served if your average-sized tribe has a high probability of having at least one guaranteed "outsider's" point of view, someone who can (and even must) think outside of the cultural box. Historically, the average sized tribe was probably around 64-75. Tribes would tend to split up as if by mitosis when they reached any more than double this size (Dunbar's Number is 150, which he himself thought was a little high. I would suggest 128 as a function of complexity and the powers of two). Obviously, given the frequency of AS in human populations (currently one per 250 to 300 according to present diagnostic criteria), not every tribe could have its own aspie mascot/hero, but aspies could fill at least part of the need. The frequency of course would tend to rise and fall over time according to usefulness or social utility. In eras and epochs where this kind of creativity proved the most useful, then we happy aspies would get lucky, get more trinkets and wampum, get some more status and respect, and then most importantly for the gene pool, get laid at last and get to make some babies. During those epochs when the outsider's point of view served no useful function, then we sad and lonely aspies would return to being reproductively marginalized. Don't mate with the weird guy— you'll just get weird babies - we don't need more of them. Ours may be some happier times, or interesting times, as the curse goes.

Challenges

Many of the greater challenges of AS can be phrased in the terms of Abraham Maslow's work. His theory on the hierarchy of needs, as charting the path to human self-actualization, highlights many of the aspie's specific problems. In general this theory states that we build our mental health from a foundation upwards, and that optimal human maturation proceeds by satisfying needs in a progression from the most basic or inescapable physiological needs, shared by the whole species, then through a series of safety and security needs, then a series of social needs, then a series of needs allowing self-esteem to develop, and finally a series of needs for individual identity, creativity and self-expression. In effect we grow at our best by successfully meeting lower-order needs before moving on to higher ones. To the extent that the lower needs are frustrated, teased, unmet or thwarted, the higher-order needs are addressed in a diminished capacity, although once beyond the physiological needs, well-chosen substitutes and sublimations may often work nearly as well.

Of the physiological needs, for breathing, food, water, sleep, homeostasis, excretion and sex, the last is usually the functional aspie's greatest challenge. In some cases hypersensitivity may lead to a shutdown of desire. Oft-repeated frustrations in finding a partner due to poor nonverbal communication skills may have the same effect. I haven't given up on Eros yet and doubt that I will. I've taken the view that touch is a form of communication that can be learned, and we aspies can be pretty good at learning. Still, sending the necessary nonverbal cues to signal desire to a potential partner can be a major frustration. You give her a look that's supposed to say, "let's get naked and play" and instead it comes out: "I want to kill you and eat your pancreas". Sometimes it's just hard for her to get around a thing like that.

Of the safety needs, for security of body from crime and violence, security of employment or finance, health and well being, personal space, sanctuary or property, and a safety net against accidents and illnesses, the socio-economic challenges related to the competent performance of working tasks in public and social environments are the biggest problem. Some aspies are so debilitated that they cannot function in public, or even move out of their parents' houses. I generally had to adapt myself to a life of part-time work with limited public exposure. But I was also able to make use of the aspie ability to obsess on a particular task with some formidable powers of focus and concentration, and thus to perform a full-time job for a finite period of time, sometimes for as long as a year or two. This worked best when a client could turn me loose with a project and avoid stepping in frequently to interrupt or change direction. But sometimes

being a part of a small think tank with a handful of creative and gifted individuals had its own kind of excitement and rewards, even when the designs kept changing.

With the social needs, for friendship, having a supportive and communicative family, and intimacy, the challenges for the aspie become obvious. We older aspies lived most of our lives without the benefit of knowing exactly what made us so different, and that benefit includes being able to explain or account for ourselves to others so they are less prone to misreading and reacting harshly to us. The blank-slaters are wrong - there is a human nature, and this nature is compromised - or at least much revised - in aspies. Most humans, as primates, come heavily armed with a hard-wired repertoire of social skills grounded firmly in instinctual abilities for un-self-conscious nonverbal communication. Having evolved as social primates, it isn't likely that an aspie's new, special, mutant wiring includes sophisticated new bypass circuitry or software for our alternative neural platforms. To the extent that an aspie is unable to send the appropriate nonverbal signals or respond in appropriate ways to them, he will tend to arouse suspicion and mistrust in strangers, or other feelings that tell strangers that he is not to be engaged or trusted. If he has difficulties with eye contact he may seem shifty or guilty or of weak character. When these reactions are repeated often it can lead to a vicious cycle of compounded alienation.

Having a supportive family can go a long way towards mitigating a potentially overwhelming accumulation of social problems and provide a bit of a head start. Again, it is only for the children now growing up in an era when AS is a known diagnosis that articulate parental understanding is possible. In my case, unfortunately, I had parents who were utterly intolerant of any social behaviors outside of the Republican, Christian, middle-class American norm, with the only two exceptions being that I was at least encouraged to excel in both school and sports. As long as I was getting straight A's in school and blue ribbons at swim meets I could hold some of the nastier criticisms somewhat at bay. But the person who I really was was not respected or encouraged at all. At the age of eight, after watching a neighbor cover his pool with plastic for the winter, I ran home with a brilliant idea and begged my father to look into getting a patent for me. You could make a big rectangular bag and fill it with water and use it for a bed. I was told, "That's the stupidest idea I've ever heard". The waterbed patent wasn't awarded for another twelve years.

Intimacy will pose its own big set of challenges. It's not uncommon for the significant others of aspies to suffer from depression or frequent fits of anger and frustration eventually leading to depression. A partner may need to consciously work at being vigilant about the aspie's nonverbal miscues, abnormal or non-existent signaling, forgetfulness of simple courtesies, or unresponsiveness to situations that may hold no interest for him. The intensity of human interaction is amplified in the aspie. He may need to reduce overall novelty to lessen this intensity, but hopefully this is for the sake of hanging on to some areas where spice and freshness are welcome. Conflict can therefore be a real problem. I have been in a lot more trouble in relationships for refusing to fight than for fighting, and there are few tactics or stratagems more devastating to an emotionally charged opponent than simply shutting down or walking away. It is important for a partner to understand that this is not because the aspie has no desire for the problem to go away. His "nasty strategy" is simply a part of a neurodevelopmental disorder. An articulation of aspie traits, as a contribution towards knowing what to expect of an aspie mate, might help a lot with the depression, but this will require sustained vigilance, maintenance and care.

Of the esteem needs, for self-worth, confidence, achievement, self-respect and respect for others, one can see how an aspie might need to find other ways to satisfy these than winning the praise that follows upon belonging, social conformity and obedience. In fact it is often very easy for an aspie to give up on these things early in life and move on with no sense whatsoever of fashion or etiquette, no interest in small talk and no attempts to form bonds or alliances for any but the most meaningful aspects of life, if at all. Unfortunately this leaves only a handful of optional routes to esteem-need gratification. Self-delusion is one, where an artificial self-importance is supposed to take the place of

praise or approval from others. There is also a pride in rebellion. Higher variations of this, with true conscience filling in for pride, can hold great satisfaction, if not great rewards, as best exemplified by Gandhi's *Satyagraha* (meaning "holding true"). But the most straightforward and simple approach might be to work towards a few valuable and meaningful accomplishments in life, to become genuinely good if not the best at something. There are a couple of catches to this one though - first, that this excellence still cannot be pursued for the sake of praise and encouragement from the people around us, and second, to become genuinely good at something might take a very long time and a lot of endurance and patience to go this far with little outside encouragement.

The growth needs, for self-actualization, ethical integrity, spontaneity, creativity, problem solving, realism and aesthetics can be the aspie's place to really shine at last, provided that he can make it through the aforesaid gauntlet without getting too bent or damaged. It is probably worth noting here that most human beings don't come this far anyway, to what Maslow called the farther reaches of human nature. The vast majority of those who fulfill their most basic physiological needs still get stuck way down below doing endless menial chores to buy the tokens needed to purchase social approval, political standing and sex with the most expensive partners. The aspie at least is usually spared this trap.

Spinning It

My question now would be this: since we know that we can undergo a shift in perspective on our condition, why not take the next step and turn it into a whole paradigm shift? Turn our bizarre and quirky thinking into creative thought, turn obsession into focus, turn compulsion into drive, turn alienation into cross-cultural perspective, turn the sense of being so small and alone into big time horizons, turn our little life into life itself, into what will outlive us. I think that kind of shift in point of view is what we so desperately need as a whole species, the NT's and all, and if there were any point or purpose to Asperger's, however artificial, that could be it, because at least some of us with this "disorder" have exactly the skill sets for that.

There was another poll taken on WrongPlanet.net, asking, "Do you suffer from Asperger's?" Of 83 responders, 28% said, "Yes" while 30% responded, "No, I enjoy it". The latter was my response as well. We can all find something to complain about, something we couldn't prevent, something we can't correct or cure, someone we want to get close to who won't be our friend because we are what we are. But life is short and that's just a big waste of time. And I wouldn't give up any one of my weird-ass perspectives or a single point of IQ for an ability to fit in, talk small or see less of the trouble that we're in as a species. Not that I didn't try. There was a fourteen-year period in the middle of my life where I tried to drink both my strangeness and all higher purpose away, to lose those things that brought so little reward. I just wanted to feel normal. That just turned out to be my worst idea ever.

I'm about as far from being a bible-quoting Christian as a boy can be without hurting bunnies and kittens, but I love this line from Luke 12:48: "Much shall be required from him unto whom much is given". From my own point of view, the gifts, while not "intended" by some cosmic plan, are at least best applied to some higher purpose, to something larger than we are: to contribute to history, or culture, or civilization, or evolution, or just to leave this world a better place for our having been here. By this I do not mean to advocate selfless service to others or sacrificing oneself to society or humanity. I've read my Ayn Rand. And my Nietzsche: Man is something to be surpassed. I would not be the one to recommend a higher purpose that goes against our "selfish" nature (especially to autistics). I would not suggest that this is a more morally correct way to go. But I still have to keep reminding myself that higher purpose isn't about me or self. It's bigger than that. How I'm feeling about me is not a good measure of the things that are greater than me. At least the higher functioning among us are able to feel this sense of higher purpose strongly enough that it will tend to justify most of the *relatively* minor difficulties and inconveniences that come with the AS package. The really gifted, like the

ones on our who's who list, have no choice but to feel it, and to be driven by higher purpose.

Man will tend to mismeasure all things, especially when he measures them democratically or by a social consensus. As a social primate his notion of success is usually a function of a successful integration into the local social order. Those psychological traits that do not contribute to this are therefore called disorders. I've used that term here with tongue in cheek, but have mostly avoided *handicap* or *disability*. *Syndrome* is somewhat better of course. But at this point I want to take a positive look at aspzie traits as a valid alternative cognitive style - and as a skill set. Aspies are indeed wired differently, but the actual wiring differences seem to be epigenetic rather than fundamentally genetic and we are not a separate race or subspecies, however much being human might embarrass us. So which of the aspzie traits might we spin into some nobler human virtues?

I've already mentioned turning the pride of rebellion into the voice of conscience, or Gandhi's *Satyagraha*. From beyond the outer edges of social consensus it is easy to see the things that we want no part of. We still want to pick our battles carefully, especially those trenches that we might be willing to die in. But mainly we are out here in a position to describe a few other alternatives, to put them in writing or paint them in pictures or sing them in ballads and myths. This is our love of science fiction too. Our great new ideas don't always catch on of course, but even that futility is a lot less than that of the ordinary, conforming man's life.

The real motives of religious people are fairly transparent to many of us because the peer pressures for blind consensus are not as active in us. Do we want to just laugh at their silliness and fears when the consequences of their beliefs pose such a danger to themselves and to others, not to mention to the biosphere that was supposedly created for their use? We are out here in a position to explore what is truly sacred, with exciting and fearless questions instead of pat, smug answers. There is freedom from and there is freedom to. We can have both. And going to war over truth? And telling other people how your god wants them to live? Well, those sorts of things are just incredibly stupid things to do. We can set a good example here. As Bob Dylan wrote: "To live outside the law you must be honest".

We have a distance from our cultures and we tend to have big, long time horizons. We know that whole empires and dynasties come and go like night and day, and we don't just know this intellectually - the slow change is sometimes palpable. Once our intra-cultural myopia is gone, all disillusioned away, we can see that that enemy country has some pretty cool people living over there. Them Buddhists have one thing all figured out while the Hindus have the other thing nailed down. Those islanders have a rite of passage that we might do well to adopt, and those desert folk tell the most wonderful myths. Why lock yourself up in only one box? We can go to the *Za Jia*, the Miscellaneous School. Eclectics can high-grade the ore and not have to drag all those tailings around. The others, those believers, just aren't allowed to open up the package and sort out the painted rocks from the few real gems. And so their treasure only weighs them down. We can pick and choose.

While we are often said to obsess on all of the little details and not see the big picture, the whole or the gestalt, this is not entirely true. Our very distance from the cultural center, the backward steps we have taken to get away from the mess at the center of civilization, has given us a kind of big-picture perspective. Here is one example of an aspzie's take on things. Please note that I said one example - another aspzie's perspective might be diametrically opposed to this, but just as alien to NT's. Take a quick look at the American tragedy in New York on 9-11-01. Roughly three thousand people died there. To most Americans that was just about the worst thing that ever happened anywhere. But most Americans seem unable to see that three thousand children starve to death every three hours. In the eight years since the attack that adds up to over 70 million children. That many children could have been fed, sheltered and given medical care with the trillion dollars spent on the blind and ignorant rage in Iraq, and America could have become a hero to the world instead of a nightmare. And yet with a still higher-ground

response, the same trillion-dollar expenditure on birth control and education for women in the third world might have saved 700 million miserable deaths in the next big round of global drought and famine. Taking some higher ground like that might have been the only way the US could have come out on top and won its war on terror. An aspie voice near the center of things might have helped a lot. From one aspie point of view, Osama bin Laden had won his war the moment the Patriot Act was passed. The trillion spent towards bankrupting the Great Satan was just icing on the cake. The US became a sufferer, a victim, and completely lost control. The social or cultural distance that we are capable of, given our social alienation, is another way to see the big picture.

We blurt things out, or else we are candid and frank. True, this is usually either because our internal censors aren't working, or because we aren't paying enough attention to the other's reactions to our words. So this usually comes across as rudeness or tactlessness. But Diogenes the Cynic spun that into the virtue of honesty, *parrhesia*, or outspokenness. He was also able to see, a little ahead of his time, that all things were made up of details, called atoms. He had to be one of us. He never embraced the group. He had the courage to tell Alexander the Great where to go and Alex respected him for it.

We tend to be both obsessive and compulsive. This means that we are able to be compelled. Might we not also be able to seek out and find compelling things on purpose? Or better yet, find two compelling things and then choose the best between them? Then the obsession becomes motive or drive or discipline. And here the aspie can be quite impressive. What if we were able to choose something compelling that was also useful to the world in some small way? If it's really an obsession you can't call it work. Isn't loving what you do one of the great keys to happiness? Now there's a skill. It's a fairly quick and effortless step for an aspie who has been obsessed with snail racing to become a leading authority on mollusks, for fun, profit and protein if need be, with hardly any extra time or investment at all.

We are narrowly focused. Instead of broad and shallow, our attention tends to run narrow and deep. Isn't the ability to concentrate and stay on task sometimes considered an admirable skill instead of a disability? Some time ago I accidentally found a really neat trick to use with this narrow focus. I suspect other aspies have found it as well, especially any of us who have sat down and read an encyclopedia: specialize narrowly in knowledge in general; focus incisively on science in general. Obviously we can't learn it all, but with our aspie judgementalness we can learn to quickly select information for its potential value, its quality instead of its quantity. Then we can get both broad and deep. And, there will be lots of room in the future for people with broad, interdisciplinary cognitive skills and knowledge. That way lies consilience and a great deal of cultural creativity.

We are judgmental. That's bad. Judge ye not lest ye be judged. Everybody is equal to everyone else. Dogs too. On the whole we aspies have to make a lot more choices and selections than other people. We are forced to develop tighter values, from outside of the system that the others are told to believe in. We tend to have ethics instead of morals. Above all, there is this: after change itself, isn't selection just about the most important force in evolution? And isn't humanity's reluctance to select away the things that it's doing wrong just about the most dangerous thing on earth, more dangerous even than evil? And isn't following that a matter of bad judgment?

The celebration of our gifts in the exercise of higher purposes might be our best way to make the inconveniences of AS seem minor in comparison. Maybe the notion of higher purpose is just a trick we can play on ourselves, a bootstrap psychology, a form of self-hypnosis. But if we can find ways to move forward like this, we might be of some valuable use to this world after all, if we choose to make that matter, and have an easier time feeding ourselves in the process. Of course another part of getting beyond the whining is learning to cultivate gratitude for what gifts we are given. To do that we have to focus on them, and in theory, focus is one of our great strengths. Still, one thing I learned the hard way about giving to a higher purpose is the need to forget about getting back. As Zhuangzi said, "Perfect sincerity offers no guarantee". In my darker hours I wanted my tombstone to read, with no small bitterness: "Don't encourage him". If you're in this for the rewards, including encouragement, it's not about higher purpose - it's still

all about you. Losing ourselves in the work, then, is not even done for the sake of the work - it's a higher way of being yourself, one which Mihaly Csikszentmihalyi describes at some length as *Flow*, and this is the state which characterizes the creative process of nearly every genius on our aspie heroes list.