

Being an Autistic Engineer

On 8 November 2017, I gave a presentation at the IMA's Employers' Forum titled *The Autistic Engineer*. It detailed my life to date and the challenges that come with getting an ASD (Autistic Spectrum Disorder) diagnosis in middle age.

The inspiration for my presentation came when I recognised a large number of people with autistic traits worked in engineering. I needed to find out why this was, in the hope that in some way I could begin to understand myself and how my brain worked. The first clue came when I compared a Google search on 'The characteristics of the best engineers' to one on 'Typical ASD characteristics' (see Table 1).

Table 1: Engineering vs. autism

Qualities of top engineers	Typical ASD traits
Problem solving skills	Unique perspective
Technical proficiency	Ability to focus and to absorb information
Mathematical and scientific ability	Above-average ability in STEM
Highly ethical and professional	Trustworthy with high integrity
Open mind and a positive attitude	Little or no prejudice
Motivation to keep on learning	Intelligence and perseverance

Looking back, compared to my peers I was always a bit different as a child. I enjoyed playing with Lego and drawing factories rather than football or pop music, etc. I also had obsessive interests and collections (things like hats, badges, fossils, books, fishing tackle and watches). But the one thing that excited me more than anything else was manufacturing: The taking of an idea and the creation of a physical object you could hold and touch. From my early teens, I knew I was going to be an engineer when I grew up.

I was not an exceptional student, but after school I went to college and did a national diploma in engineering. Post college I went to Brunel University and completed a degree in manufacturing engineering.

Initially, I moved into the halls of residence, but after the first two nights I packed up and moved back home. The excessive noise and boisterous behaviour held no appeal to me and all the 'mixer' events seemed to focus on consuming the largest amount of alcohol in the shortest amount of time. I didn't drink (I need to be in control) and so just felt awkward and out of place.

Waking up at home on day three of my university career, it suddenly dawned on me that I only lived 20 minutes drive from the campus. This was purely a fluke and had not been planned. If I had ended up at the other end of the country, my life these days would probably be very different. Again I was not an amazing student and the whole student lifestyle just did not appeal (I lived at home until I was 25).

After leaving university, I applied to all the big graduate schemes including AWE but could not get a job. Eventually my mum, not happy to see me hanging around at home, marched me down to the local doctor's surgery and got me a job as a GP receptionist! I think she was friends with the practice manager.

Looking back now I can see how being autistic was a great help when doing this job:

Ring! Ring!

Caller – "Hello, is it possible to see the doctor today?"

Reception – "No" (I hang up).



James Cody at AWE

Seriously, it was a six-month crash course in learning how to talk to people, deal with people, etc. Probably the best education I ever had! It is interesting because if you ever read the standard textbooks on autism, they talk about communication difficulties being one of the crosses you must bear as an autistic individual. Yet none of them ever puts the idea in your head that you can do something about it and that communication skills *can* be learnt. Autistic people make the best students!

I found my first engineering job at a local company that I had done work experience with when I was at college. It was an entry level position (engineering trainee) and after six months the company started talking about sending me on day release at college to do a workshop qualification. I panicked and left. This was not how I saw my career going.

It took approximately three months to find another job – quality engineer – I initially went for the interview and received a letter of rejection. I wrote back asking for feedback so I could do better next time, and had a phone call asking me to come back in. The production director said nobody had ever done that before and he gave me the job.

The best part of working for this company was getting to fly off somewhere on a Monday, work at a hotel supervising local labour, then fly home on a Friday. Being devoid of any foreign language skills meant I communicated with hand signals and gestures. This proved highly efficient and removing the need for small talk made the job go a lot faster.

After five years, I had a phone call from an aerospace company in Southampton. They had found my CV online and wanted to

invite me for an interview. They needed the specific skills I had learned over the past five years and offered me a job on the spot. Five years further on, I had another phone call, this time from AWE. They had found my CV online and were desperate for engineers.

Coming to work at AWE felt like coming home. The work was challenging and unique, individuality was encouraged and a sense of community had grown up behind the barbed wire fences.

Approximately two years later my wife started to get sick, and the stress of home meant I could no longer cope with work.

My GP sent me for an assessment with the adult autism service, and I was subsequently diagnosed with ASD at the age of 36.

Getting a diagnosis was one of the best things that ever happened to me. It released me from years of internal frustration and self-loathing from my lack of ability to communicate with people successfully, and the feeling that I was somehow defective inside.

After I received my diagnosis I started talking to work colleagues and friends about autism and the challenges autistic people face every day. That was nearly two years ago now, and I guess I have not stopped talking about it since (at some point they are going to get fed up with me talking about it and send me back to the shed!).

I have always been a fan of Chris Packham, even before I found out we shared neurodiversity as well as a 'unique' fashion sense. We are both diagnosed autistics, both diagnosed in middle age and have both had challenges to deal with that have affected those around us.

Chris has a mesmerising on-screen presence that means you can't help but stop and watch when he is on the telly. His passion

and deep understanding of his subject comes across in spades.

Chris recently discussed his autism and how it has affected his life in an hour-long documentary, *Chris Packham: Asperger's and Me*, on BBC2. The most interesting part of the documentary was when Chris travelled to America to meet doctors who were researching a treatment for autism. This raised the question that

if a tablet existed that would 'cure' a person of autism, would you take it?

Whilst I can understand the pain of the parents of severely affected children who lose the ability to communicate and seem to live inside their own brains, for the children who are slightly 'weird' or

'eccentric' at school this would be a disaster.

Autistic people have always existed at the fringes of society, not afraid to do something different, be unpopular or probe the impossible. Without the freedom autism gives its 'sufferers' to ignore convention and seek out truth through the purity of fact, human civilisation, as a whole, would not advance as well.

Autism is not a sentence, nor does it need to be a life-limiting condition. A diagnosis of autism gives the individual freedom to focus on their passions, be it nuclear physics or the genetics of butterflies, without the need to accept the prejudice or ridicule endured by earlier generations of innovators. But as with all gifts, it comes with responsibilities. It is up to the individual to work out where their passion lies, and go after it 100% – for the good of mankind.

James Cody
AWE

If you would like more information on ASD please contact The National Autism Society (www.autism.org.uk). For more about AWE see www.awe.co.uk.

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