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Autism, Algorithms, Google and the Rise of the Savant Garde
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“I think all tech people are slightly autistic.” So wrote Canadian novelist Douglas Coupland in his 1995 novel, *Microserfs*, depicting the life of Microsoft workers in the halcyon days of Silicon Valley.

Many others have since got in on the act of identifying a resonance between autism and the culture of computer usage. In 2001, *Wired* magazine’s Steve Silberman dubbed Autistic Spectrum Disorders (ASDs) the ‘Geek Syndrome,’ noting the ways in which the lifestyle of computer geeks echo the rigid patterns of obsessive focus that define ASD behaviours (Silberman, 2001). Bookending the decade with the same pop psychological analysis, another *Wired* contributor, Steven Levy, described the “dash of Asperger’s [syndrome] in the mix” in the personality of Larry Page, the co-creator of the Google search engine (Levy, 2011).

These journalists are identifying a recurring cultural meme. Try Googling “autism” along with “[insert computer entrepreneur name here]” to see it for yourself.

Simon Baron-Cohen, a Professor of Psychiatry at the University of Cambridge, has laid an empirical foundation for discussing this phenomenon. In a fascinating study of IT workers in the Netherlands, researchers found that there is a significantly higher rate of workers with autistic-spectrum conditions within “high-systematizing” workplaces (Roelfsema et al, 2012). Market forces have also got in on the act. Thorkil Sonne created his data-management business, Specialisterne, with the specific intent of employing autistic people. “We truly believe,” he said, “that one percent of business tasks can be solved just as well – or better – by a person with autism” (Specialisterne, 2013).

When novelists, academics and entrepreneurs agree, surely the verdict is in: we are seeing the rise of what I call the ‘savant garde’ – a class of people who are increasingly defining culture according to autistic traits. What are we to make of this autistic cultural resonance? How can we unravel the puzzle of the rise of the savant garde?

In researching my PhD, the first clue that I found to explain the puzzle came from the affinity that autistic people often have for algorithmic functioning. Autistic children love robots, and many show a strong preference to play with robots rather than human beings. In a strikingly pragmatic approach, the AuRoRA Project, a research group from the University of Hertfordshire, works to integrate robots into the training regimes of autistic children. The predictable ways that robots behave, and the endless possibility for games based in mimicry, make robots seemingly the perfect companion (AuRoRA Project, 2013).

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The second clue came from a revealing interview with Temple Grandin, an autistic woman from the United States. “My mind is like a CD-ROM in a computer,” Grandin said to psychiatrist Oliver Sacks (Sacks, 1995, p.269), who later reflected upon her identification with computational metaphors.

“She [Grandin] had built up a vast library of experiences over the years. They were like a library of videotapes, which she could play in her mind and inspect at any time – ‘videos’ of how people behaved in different circumstances. She would play these over and over again and learn, by degrees, to correlate what she saw, so that she could then predict how people in similar circumstances might act... ‘It is strictly a logical process,’ she explained.” (Sacks, 1995, p.248)

This approach is radically pragmatic. If autistic people like Grandin can’t intuitively grasp the usual social cues, then they can use algorithmic pattern recognition to successfully calculate and imitate normal behaviour – a kind of everyday Turing Test where the person produces responses as if they were an artificially intelligent computer. Despite the ostensible success of this algorithmic approach, Grandin remains an outsider to human relations. “Much of the time,” she says, “I feel like an anthropologist on Mars” (Sacks, 1995, p.248).

Before this impression of autistic functioning can fade from your mind, I want you to now make a mental leap to consider the Google search engine. This may feel unexpected, but the similarities are striking, if not a little disturbing.

When Sergey Brin and Larry Page created the prototype of the Google search engine back in 1998, they did so according to the principles of artificial intelligence. The PageRank algorithm at the heart of the search engine works by summing up the total of human clicking preferences, as expressed through the hyperlink structure of the Web, so as to calculate the answer that seems the most relevant. PageRank, they claimed, gives “an objective measure of... people’s subjective idea of importance” (Brin & Page, 2012 [1998], p.3827). Google searching is algorithmic mimicry on a wide scale. It passes the Turing Test for artificial intelligence on a daily basis.

The implications for Google users is profound. Every time a person uses the Google search engine, they inhabit – for a moment – the role of cultural mimic skimming the surface of user data, navigating social meaning from the outside, much like Temple Grandin. The metaphor of ‘surfing the Net’ is a strikingly apposite description for this process. Clinical descriptions of echolalia are crucial here. Where an autistic child’s echolalic speech is a use of language that lacks meaning, so the detached operations of search engines generate ‘echolalic’ results. Google is a numb global ‘id’ generating endless streams of cultural echolalia.

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Sigmund Freud once said that the line between ‘normal’ and ‘abnormal’ mental functioning is always blurry, and that clinical descriptions of psychopathologies are a key to unlocking the logic of ‘normal’ mental functioning. As he famously put it, “We are all a little neurotic” (Freud, 2001 [1901], p.278). This gives us a way to describe the autistic resonance surrounding the Google search engine: we are all now ‘a little autistic’ when we inhabit the algorithmic positions of digital society. Of course we are not autistic per se, but rather we are drawing from a mode of functioning, of which autism is a pure-type crystallisation.

Does the idea of our being ‘a little autistic’ sound strange? Consider plagiarism, a phenomenon that has taken on new life in an Internet age. Plagiarism is, by definition, an act of cultural mimicry that lacks engagement with the meaning of the material. Don’t plagiarised essays carry a strange semblance to the process of Google searching and, in turn, an uncanny echo of the echolalic utterings of an autistic child? In short: plagiarism is a form of cultural echolalia that carries the trace of autistic functioning.

According to Frances Tustin, a pioneer in the psychoanalytic treatment of autistic children, autism arises from blocked processes of interpersonal differentiation that stem from primal anxieties. Where non-autistic children move beyond the initial omnipotent state of infant imagination, autistic children, out of a state of terror, cling to the illusion of omnipotence by generating controllable streams of sensation that engulf others who are never really experienced as separate entities. The sensory obsessions and ritualised behaviours *are* the autistic child’s being; interruptions to these patterns are experienced as *amputations* of bits of the self – hence the primal distresses of autism.

Lacking the capacity for separation, autism can be understood as a *topological* condition. Autistic experience has a strange two-dimensional quality in which there is a failure to sustain a depth dimension to mental experience. As Tustin describes, “Autistic children live in terms of surfaces; their experience is flat and two-dimensional. Children in this state are not aware of the inside of objects” (Tustin, 1990, p.41). This lack of interiority voids the possibility of interpersonal and intellectual meaning. Echolalic speech has all of the surface properties of language, but lacks the ‘inner’ dimension of social meaning. Autism is a two-dimensional topology – flattened individual subjects generated within flattened intersubjective fields of experience.

The Internet shares this two-dimensional topology in the way that it structures information – a point that is increasingly noted by critics. Philosopher Hubert Dreyfus describes the Internet as a flattened realm of information. “There are no hierarchies; everything is linked to everything else on a single level, and meaning is irrelevant” (Dreyfus, 2008, p.12). Cultural theorist Tara Brabazon describes the loss of human categories in the organisation of information on the hyperlinked Web.

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“The internet is not a library,” she writes, “Google is not a library catalogue. These are dangerous metaphors” (Brabazon, 2007, p.38). Instead of three-dimensional ‘bodies’ of human knowledge, the Internet hosts two-dimensional ‘skins’ of hyperlinked information.

This flatness of information promotes a flatness of cognition for users. Surveying the emerging neuroscientific literature into Internet usage, Nicholas Carr argues that the presence of hyperlinks within online texts promotes a ‘shallow’ reading of texts. When people read online information they are much less likely to engage with it (Carr, 2010). This research provides an eerie fulfilment of Brin and Page’s original model of algorithmic human behaviour. “We assume there is a “random surfer” who... keeps clicking on links... but eventually gets bored and starts on another random page” (Brin & Page, 2012 [1998], p.110). The Internet, as an intersubjective realm where information lacks interiority, tends to generate similarly flattened individual subjectivities – people without insides.

At the beginning of the computer age, so Coupland said, it was ‘tech people’ who were ‘slightly autistic;’ in the unfolding of the digital age it turns out that we are all ‘a little autistic’ as we share in the historical march of the savant garde.

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