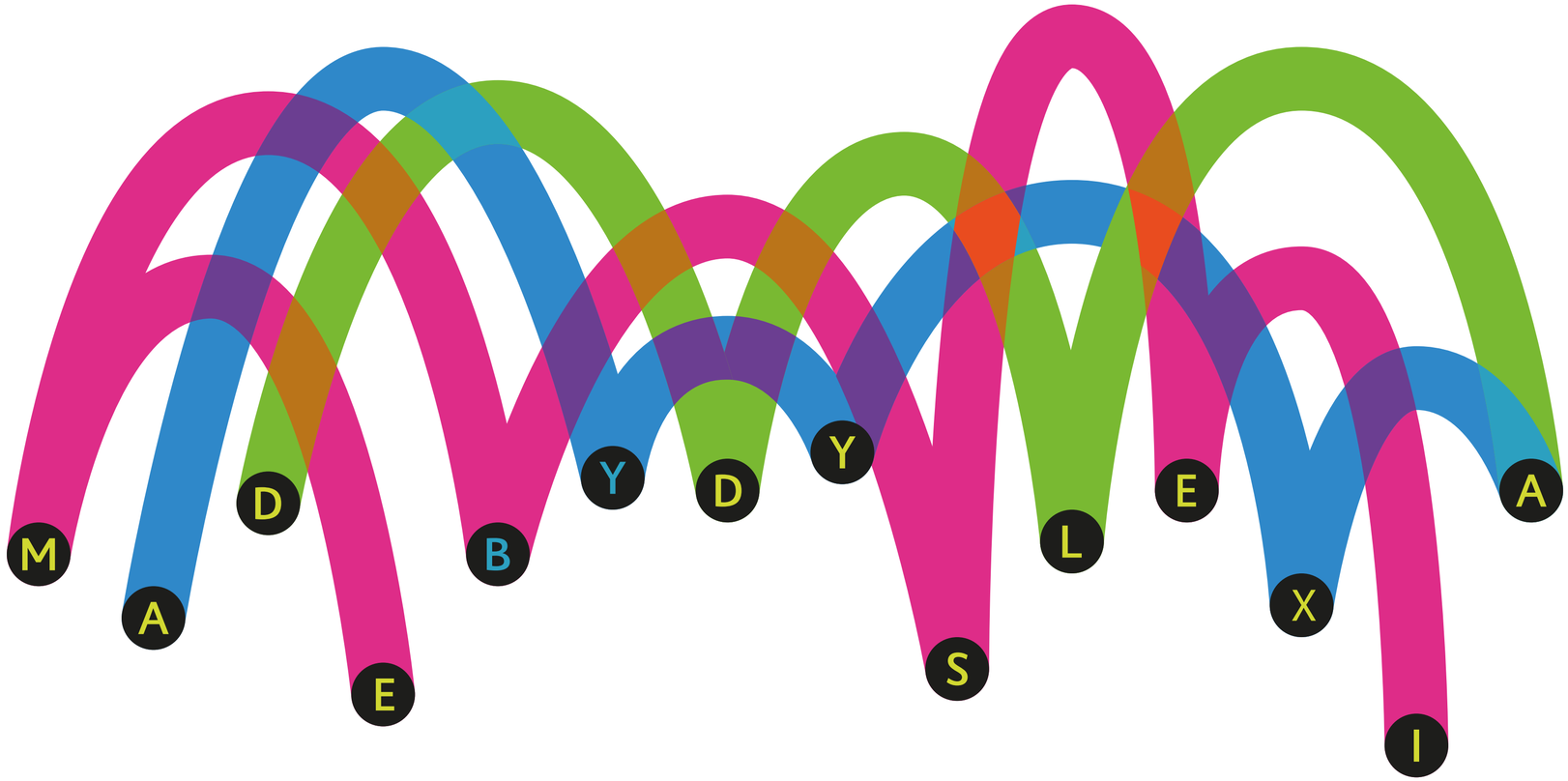

CONNECTING THE DOTS

Understanding Dyslexia | Launch Report May 2017

1 INTRODUCTION

About Us & This Report

WHO WE ARE

“It’s time we all understand dyslexia properly as a different thinking skill-set, not a disadvantage”.

Sir Richard Branson - Ambassadorial President Made By Dyslexia

Made By Dyslexia is a global charity led by successful dyslexics. Our purpose is to help the world properly understand and support dyslexia.

Working with experts, psychologists and dyslexics, we develop campaigns, films, tools, and tests to explain dyslexic thinking.

Dyslexic minds process information in divergent, lateral ways. In fact they’ve created some of the world’s greatest inventions, brands, and art.

However many still perceive dyslexia as a disadvantage, when actually it’s a different way of thinking that if harnessed, can lead to success.

Education systems aren’t designed for dyslexic thinking, and most teachers aren’t trained to identify dyslexia, meaning many dyslexics go through life without knowing they’re dyslexic or understanding their brilliant potential.

We want to ensure all dyslexics are identified, inspired and enabled to reach their full potential.

OUR GOALS

“Dyslexic thinking has many benefits. If identified and supported; inspired and encouraged, dyslexics can achieve amazing things. We want to level the playing field so all dyslexics can succeed”.

Kate Griggs - Founder Made By Dyslexia

Made By Dyslexia has two global goals.

- That dyslexia is properly understood as a different way of thinking.
- Work with governments, charities, schools and parents to ensure all dyslexic children are identified early and given the support they need

ABOUT THIS REPORT

This report aims to give a concise and unique overview of dyslexia from the perspective of dyslexic people themselves.

It summarizes what we consider to be the most important information, research, and science. We provide new research explaining dyslexic thinking skills and their importance in different fields and in the world today.

We outline the misconception that surrounds dyslexia, with new research by YouGov which reveals an urgent need for change.

And lastly, we explain how we plan to help drive this change.

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ABOUT

DYSLEXIA

BASIC FACTS

“When school or work is difficult, the best news to tell a parent, child or adult is “it’s because you have dyslexia”. This unlocks doors to self-understanding”.

Bernadette McLean, Principle Helen Arkell Dyslexia Centre. (established 1971)

- At least one in ten people are dyslexic.[1] But it’s estimated less than half of dyslexics are being identified.[2]
- Dyslexia is genetic so runs in families.
- Dyslexics have a different way of processing information which is caused by physical differences or ‘wiring’ of the brain.
- This difference results in a pattern of strengths like critical thinking, creativity and communication skills.
- It also results in challenges affecting traditional learning such as reading, writing, spelling, mental maths, memory & concentration.
- Each dyslexic has a different pattern of strengths and challenges, and dyslexia varies in severity.
- Early identification of both difficulties and strengths is key to success within education, and preserving self-esteem.

1 Dyslexia International, (2014). Dyslexia International: Better training, Better teaching. Brussels: Dyslexia International, p.2.
2 "D2yslexia and Literacy Difficulties: Policy and Practice Review ." The Dyslexia-SpLD Trust, September 2013, p.26

HISTORY OF DYSLEXIA

decades of clear consensus

"Reading disorders have been extensively researched such that dyslexia, the existence of which was once questioned, is now widely recognised as a specific difficulty in learning to read. Research also shows that dyslexia affects more than the ability to read and write."

Sir Jim Rose, Rose Review of Dyslexia DfE 2009

Dyslexia was first reported in 1896 in the British Medical Journal, originally referred to as "Word Blindness".[3]

In 1935, Dr.'s Orton and Gillingham from Columbia University published the first successful dyslexia intervention programme.

These methodologies, although updated and improved, are still recognised today as best practice for teaching dyslexics.

In 1936 Millfield became the first school in the UK to support dyslexia using these methodologies. Millfield was pioneering in recognising and nurturing dyslexics strengths to enable their potential; this remains a core ethos of the school today.

Many schools followed Millfield's lead by setting up dyslexia units and training staff in dyslexia. Today dyslexia 'centres' have been established all around the world and have helped millions of dyslexic children to succeed.

In 2009 after a campaign lead by our founder Kate Griggs, the UK Government commissioned Sir Jim Rose CBE to conduct a report on how to support dyslexic pupils in state funded schools, agreeing with campaigners that not enough was being done.

The report identified many specific issues with the current academic and testing structure, and made a number of recommendations, including early identification, specialist support, and a programme for teacher training. Sadly these recommendations were never fully implemented, and provision for dyslexic children remains very patchy and often nonexistent unless parents are able to pay.

3 Morgan, W. Pringle. "A Case of Congenital Word Blindness." The British Medical Journal, November 7, 1896

THE FUTURE

21st century minds & neuroscience

"We know more about dyslexia than we know about cancer. We know how to identify it and support it; and that with dyslexia comes a sea of strengths".

Dr. Sally Shaywitz - Yale Centre for Dyslexia & Creativity

With generations of dyslexics enabled to learn effectively, there is now clear consensus about what is needed to teach dyslexics.

Generations of successful dyslexics have provided a wealth of evidence of the benefits of dyslexic thinking skills. These benefits have even been displayed in the many who have not benefited from a supportive education and succeeded "against the odds". With this, leading educationalists, psychologist, behavioural scientists and neuroscientists from around the world have shifted focus to fully understanding and nurturing dyslexic minds. They're finding certain fields and sectors actively recruit and attract dyslexics because of their lateral, creative, different way of thinking.

Books such as Dyslexic Advantage by Dr.'s Brock and Fernette Eide, and Minds Eye and Thinking Like Einstein by Thomas West are just some of the many publications that are cataloging dyslexic thinking skills and their high incidence in Science,

Architecture, Technology and Media for example. More populist authors like Dan Pink (Whole New Mind) and Malcolm Gladwell (David and Goliath) refer to the ability and talent of dyslexia referencing many successful dyslexics who attribute their success to dyslexia.

Advances in neuroscience and magnetic imaging are enabling extraordinary insight into the physical differences in dyslexic and non-dyslexic brains. These physical differences may explain this 'sea of strengths' in dyslexic thinking skills. One great example is Dr. Manuel Casanova University of Kentucky School of Medicine who studies the connectivity of the brain, specifically the differing length of the axons linking the mini-columns in both dyslexic and non-dyslexic brains, and the significance this has to cognitive reasoning. He found that dyslexic brains have a bias to long distance connections (axons) between mini-columns, which he suggests leads both to the big-picture processing skills and a weakness in fine-detail processing which we find in dyslexics.[4] Providing a real life application to this research, nine out of ten dyslexics describe their thinking as being able to "see past detail to gain a strategic (big picture) view of a subject or problem".[5]

Made By Dyslexia aims to take an active role in the neuroscience of dyslexic thinking with particular interest in neuroplasticity. We are currently seeking partners to work with on a research project in this field.

4 Casanova, Manuel F. "Increased White Matter Gyral Depth in Dyslexia: Implications for Corticocortical Connectivity." National Institute of Health, July 9, 2016

5 Griggs, Kate. "State of the Nation Report." Made By Dyslexia, 2017

3 DYSLEXIC THINKING

Explained

EXPLAINED

Made By Dyslexia Research & Testing

Our founder Kate Griggs is dyslexic and has many family members who are dyslexic as well. A lifelong advocate for dyslexia, Kate trained in dyslexia and has worked in the field for many years as a well-known campaigner turned researcher, having interviewed thousands of successful dyslexics and engaged with many experts and thought leaders in the field to further her understanding of dyslexic thinking.

Building on this unique knowledge and understanding of dyslexia, Made By Dyslexia has conducted one of the largest research of its kind into dyslexic thinking skills, assimilating the research evolving around dyslexic abilities, different intelligences, and the supporting neuroscience. We conducted extensive research with dyslexic people, specifically successful dyslexics, gathering unique insight into their strengths, thinking skills, difficulties and the emotional impact of dyslexia.

Working with psychologists and psychometricians, we have developed a dyslexic thinking skills framework and test based on a process of **exploring the latest research**, and then **qualitative** (asking people directly about their positive experiences of being dyslexic; and asking subject matter experts to identify key dyslexic skills) and **quantitative** (testing the framework by getting people to rate themselves against the six dyslexic skill areas) research. The results were then **benchmarked** against a representative group of dyslexic adults.

DYSLEXIC

Thinking Skills

“Dyslexia is an asset. It means you think differently. Most of the creative people I know and employ are dyslexic and highly intelligent at the same time”

Anya Hindmarch

Dyslexics think laterally, creatively, and differently. Whilst no two dyslexics are the same, all will have a combination of some of the following skills which draw them towards specific careers and fields of endeavour which complement their skills and way of working.

Visualising: Moving, Making & Inventing

Imagining: Creating & Interpreting

Communicating: Explaining & Storytelling

Reasoning: Simplifying, Analysing, Deciding, & Visioning

Connecting: Understanding-self, Understanding-Others, Influencing & Empathising

Exploring: Learning, Digging, Energising & Doing.

The research groups rated their ability in each skill from Excellent, Very Good, Good, Average, Poor or Don’t know. The following percentages combine Excellent, Very Good and Good showing that a high percentage of dyslexic are ‘above average’ or ‘well above average’ in all of these skill areas, with many respondents saying they were excellent or very good.

DYSLEXIC THINKING - SKILLS

Specific Skills: These relate to career paths often preferential to dyslexic thinkers

Above Average

VISUALISING: Interacting with space, senses, physical ideas & new concepts.	**75% Visualising Overall**
Moving - physical interpretation & game playing. Examples: Dancer, Musician, Sports player.	**69%**
Making - visualising, planning & making. Examples: Engineer, Architect, Craft worker, Programmer, Designer, Chef, Gardener	**77%**
Inventing - exploring possibilities, making connections & inventing. Examples: Scientist, Technologist, Entrepreneur.	**79%**
IMAGINING: Creating an original piece of work, or giving ideas a new spin.	**84% Imagining Overall**
Creating - creating completely original work from your imagination. Examples: Designers, Artistes, Composers, Writers.	**77%**
Interpreting - using imagination to give ideas a new twist, or bring out a fresh angle. Eg: Actor, Advertiser, PR, Director, Photographer.	**90%**
COMMUNICATING: Crafting & conveying clear & engaging messages.	**71% Communicating Overall**
Explaining - assessing situations/information, & explaining clearly to other people. Examples: Journalist, Marketeer, Politician, Teacher, Campaigner.	**78%**
Story-telling - creating vivid & engaging experiences in words, pictures or other media. Examples: Author, Writer, Games Developer, Song Writer, Film Maker.	**63%**

GENERAL SKILLS

these relate to most sorts of education, activities or careers.

Above Average

REASONING: Understanding patterns, evaluating possibilities & making decisions.	**84% Reasoning Overall**
Simplifying - understanding, taking apart & simplifying complex ideas & concepts.	**77%**
Analysing - using logic to decide on the strength of an argument or where the truth lies.	**88%**
Deciding - interpreting patterns & situations to predict future events & make decisions.	**75%**
Visioning - seeing past detail to gain a strategic (big picture) view of a subject or problem.	**94%**
CONNECTING: Understanding self; connecting, empathising & influencing others.	**80% Connecting Overall**
Understanding Self - recognising & managing own feelings, & understanding how they affect own behaviour and that of others.	**73%**
Understanding Others - understanding & interpreting the verbal, physical & emotional reactions of other people.	**79%**
Influencing - managing, influencing & inspiring constructive emotions in other people.	**85%**
Empathising - sensing, understanding & responding (emotionally and/or practically) to how people feel.	**81%**
Exploring - Being curious & exploring ideas in a constant & energetic way.	**84% Exploring Overall**
Learning - having a curiosity for finding out new things and learning new skills.	**83%**
Digging - looking into things in a way that means most is learnt or discovered.	**71%**
Energising - being so passionate about something it gives a buzz and tenacity to learn about it.	**92%**
Doing - using new knowledge to achieve a result that surprises & pleases self or others.	**89%**

Our dyslexic thinking test can be found here **madebydyslexia.org**

GENERAL SKILLS

these relate to most sorts of education, activities or careers.

The research groups were also asked to answer **Yes** or **No** to a series of questions about their dyslexic difficulties and the emotional impact they felt as a result of dyslexia. These questions are particularly relevant to test/exam education.

2/3 of dyslexics said they felt that they couldn't keep up or do the things other children could do by aged 7-8

1/3 of dyslexics said they felt that they couldn't keep up or do the things other children could do by aged 5-6

DIFFICULTIES	YES
Does it take you longer than others to read text?	89%
Do you have to reread things more than once to get their meaning?	90%
Do you have difficulty getting thoughts on paper?	77%
Is you spelling and punctuation poor?	89%
EMOTIONAL IMPACT	
Has dyslexia ever impacted negatively on your self-esteem?	83%
Has dyslexia caused you stress or anxiety?	89%
Has dyslexia ever made you feel angry stupid or embarrassed?	90%

Full research findings and their impact on education will be published later this year in our **"Dyslexia: State of the Nation Report"**.

4 MISCONCEPTIONS

Need For Change

PUBLIC PERCEPTIONS

YouGov Research

In April 2017 we commissioned YouGov to conduct research to gauge public opinion of dyslexia.

The findings show very clearly that whilst the public have some understanding of the difficulties that dyslexic people have with traditional learning, only a very small percentage understand dyslexic thinking skills and the positive characteristics of dyslexia.

Overall only 3% of respondents believe dyslexia is a positive trait.

Respondents were asked which if any of the following characteristics would you associate with dyslexia? The first column is YouGov research reporting public opinion; the second Made By Dyslexia research reporting views of dyslexic people.

	PUBLIC	DYSLEXICS
Good at problem solving	12%	84%
Lateral thinking	13%	84%
Creative	19%	84%
Artistic	14%	77%
Bad Spelling	73%	89%
Difficulty Reading	85%	89%

HIDDEN DIFFICULTY

“Dyslexics are round pegs in square holes when it comes to school. We don’t fit that well unless our way of thinking is recognised and supported.”

Kate Griggs Founder Made By Dyslexia

So, why, despite decades of knowledge does dyslexia still remain so misunderstood and un-diagnosed? Arguably this all starts in early education because the majority of teachers still aren't trained to identify and support dyslexia.

Dyslexia is often called the ‘hidden difficulty’. You cannot ‘see’ dyslexia and if you don’t know what to look for it’s easy to overlook or misinterpret. Its pattern of strengths and weaknesses make it a bit of an enigma, with seemingly bright people struggling with seemingly ‘easy’ tasks. So without training or understanding, it is easy to see why it’s misunderstood.

To compound this, dyslexics often hide their difficulties, embarrassed that they don’t learn in the same way as other people and this can lead to anxiety, stress and self-esteem issues.

“9 out of 10 dyslexic said their dyslexia made them feel angry, stupid or embarrassed”

Made By Dyslexia Research 2017

A University of Stirling study into the relationship between dyslexia and drug dependence found that 40% of drug dependents were dyslexic.[6] American research has also shown that nearly half of young people under 15 who’ve committed suicide were diagnosed with learning difficulties.[7]

HIDDEN DIFFICULTY

"Dyslexics are round pegs in square holes when it comes to school. We don't fit that well unless our way of thinking is recognised and supported."

Kate Griggs Founder Made By Dyslexia

In the UK, changes to testing and exams mean dyslexic children are now unable to fully demonstrate their knowledge or reach their potential. These changes mean many dyslexic children will be deemed 'failures' at all testing points (6, 7, 11, and 16), which will undoubtedly affect their self-esteem and could result in increased mental health issues. Furthermore this could potentially leave dyslexic children out of work and short on prospects; there is a risk that this could have long-term effects on the UK economy and society.

We are campaigning for changes to testing and exams, and for better identification and understanding of dyslexia.

Our 'state of the nation report', due later in 2017, will fully outline this impact, alongside recommendations and affordable digital solutions which we are helping to identify and develop.

"School was a struggle for me, people just thought I was thick. I really needed someone to help me understand my strengths".

Jamie Oliver

6 Rowdy Yates, "Bad mouthing, bad habits and bad, bad, boys: an exploration of the relationship between dyslexia and drug dependence" Journal on Mental Health and Substance Use, Volume 6, 2013, Issue 3, Pages 184-202.
7 Carol Wright-Strawderman, Texas Tech University, and Billy L. Watson, University of New Mexico . "The Prevalence of Depressive Symptoms in Children with Learning Disabilities" Journal of Learning Disabilities Volume 25, Number 4, pp. 258-264.

5

MADE BY DYSLEXIA

Next Steps

COMMUNICATING

Campaigns

Communications - We're working with WPP agencies and others to build bold, creative campaigns and digital comms. Their generous pro bono support gives us huge communications power to shape global opinion & behavioural change.

Celebrity Support - We're gathering support from dyslexic celebrities who can share their own experiences, create inspirational and sharable content, and help amplify the message.

Public Support - We're gathering support from dyslexic people, and their families and teachers to help us spread the word.

SOLUTIONS

Tools & Films

Online Solutions - We're creating innovative, scalable digital solutions; using Youtube, Podcasts & iTunes U, together with online tests and screeners.

CAMPAIGNING

Creating Change

Communications - We're working with charities, educators and governments to influence, expedite and simplify identification and support.

6 SUPPORTING

Information & Notes

HOW DYSLEXIA AFFECTS LEARNING

Reading. Difficulties recognising and manipulating sounds, letters and words make learning to read difficult. Once reading is grasped, dyslexics remain slow readers.

Memory Systems. Problems with memory systems can affect all learning. Verbal Memory (remembering verbal instructions); Sequential Memory (ordering facts and information), Working Memory (keeping facts in mind in order to manipulate them) and Visual Memory (recognising symbols, letters and words).

Spelling, Grammar & Punctuation. To excel at spelling, grammer, and punctuation, you have to learn to retrieve a series of information, skills and rules. Dyslexic children's difficulties in the memory systems make it difficult for them to learn and apply these skills and rules.

Maths. Dyslexic's struggle with sequential and working memory means it's very difficult, and often impossible for them to learn and remember times tables. Memory problems make it difficult for them to do mental arithmetic, although they are often very good at conceptual, higher level maths. Therefore it's essential to identify dyslexics and not label them 'maths failures' because of their memory difficulties, whilst failing to recognise and nurture any higher level maths skills.

Exam Changes. Memory difficulties make recalling facts difficult, particularly when under pressure in exams. The removal of coursework, and speaking and listening from exams is very disadvantageous for dyslexics. They excel in the reasoning and exploring skills applied in coursework, and have excellent verbal reasoning and communication skills. By removing these elements from exams we have removed the opportunity for dyslexics to demonstrate their knowledge and understanding of a subject.

Exams Extra Time. Unlike non-dyslexics, literacy never becomes automatic for a dyslexic. They constantly have to think about every action and process they're doing, then put them all together in quick sequence to complete their work. As a result, it takes dyslexics approximately five times longer than others to complete literacy tasks. This is why extra time in exams is essential for all dyslexic children (and in some cases the use of tech aids too). Research by U.S. universities has found that extra time has no benefit to non-dyslexic children, but is vital for dyslexics and impacts grades, often dramatically.

DYSLEXIC THINKING

Real Life Research Examples

Entrepreneurs In 2003 BBC Mind of a Millionaire commissioned research though Tulip Consulting. In the study the psychologists "found self-made millionaires are four times more likely to 'suffer' from dyslexia than the rest of the population." [8]

In 2007 a study by Julie Logan, professor of entrepreneurship at the Cass Business School London, found that more than a third of the US entrepreneurs she surveyed - 35 percent - identified themselves as dyslexic. The study also concluded that "dyslexics were more likely than non-dyslexics to delegate authority and to excel in oral communication and problem solving". [9]

Key Dyslexic Skills - Communicating, Connecting, Visualising, Exploring.

GCHQ "In 2014 GCHQ announced it was employing more than 100 dyslexic spies to harness their analytical skills in the fight against terror. The British intelligence agency uses their ability to analyse complex information in a "dispassionate, logical and analytical" way to combat threats such as foreign espionage. While many people with dyslexia struggle with reading or writing, they are often extremely skilled at deciphering facts from patterns or events". [10]

Key Dyslexic Skills - Reasoning & Exploring.

Visual Spacial Abilities & Science "The fact that those with dyslexia include many accomplished scientists, including some recognised with a Nobel Prize, has prompted researchers to suggest that the neurology of dyslexia may predispose these individuals to advantages in visually-intensive domains such as science. Research conducted by Smithsonian Institution and the National Science Foundation in 2011 found evidence of a link between dyslexia and abilities for visual processing useful in astronomy".

Key Dyslexic Skills - Visualising, Imagining & Exploring.

8 Gill, Charlotte. "Dyslexia: a route to riches." April 12, 2012. Accessed April 21, 2017. http://www.standard.co.uk/news/dyslexia-a-route-toriches-6968839.html.

9 Bowers, Brent. "Study shows stronger links between entrepreneurs and dyslexia." November 05, 2007. Accessed April 21, 2017. http://www.nytimes.com/2007/12/05/business/worldbusiness/05iht-dyslexia.4.8602036.html.

10 Philipson, Alice. "GCHQ employs more than 100 dyslexic and dyspraxic spies." The Telegraph. September 21, 2014. Accessed April 21, 2017. http://www.telegraph.co.uk/education/educationnews/11111584/GCHQ-employs-more-than-100-dyslexic-and-dyspraxic-spies.html.

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