

# The dyslexia debate continues

**W**HEN the dyslexia storm broke in September, I was not surprised that one tactic employed by detractors was to put words in my mouth and then attack them. I didn't expect to find such an approach employed in *The Psychologist*.

The programme (entitled 'The Dyslexia Myth', not 'The Myth of Dyslexia') did not argue that dyslexia was a myth; it stated that 'the common understanding of dyslexia is a myth which hides the scale and the scandal of true reading disability'. Indeed, as I (and others associated with the programme) have repeatedly said, the question as to whether dyslexia exists or not is essentially meaningless.

The fallacy of such a question becomes clear when one examines working definitions such as that of a BPS working party report which stated: 'Dyslexia is evident when accurate and fluent word reading and/or spelling develops very incompletely or with very great difficulty.

*Following September's Dispatches programme 'The Dyslexia Myth', The Psychologist featured an article by Rod Nicolson in the November issue ('Dyslexia: Beyond the myth'). Here, JULIAN ELLIOTT, who featured prominently in the original programme, responds to Nicolson's article. We also present the views of others who wrote to our Letters page concerning the topic. All have been edited.*

This focuses on literacy learning at the "word" level and implies that the problem is severe and persistent despite appropriate learning opportunities' (BPS, 1999, p.64). On this basis, how could one question the existence of dyslexia? The more meaningful question is how can this position be reconciled with the many very different definitions (and symptoms) employed by others, and what relevance do these varied conceptions have for clinical/educational intervention? In this respect, I was pleased that Nicolson accepts the important point that diagnosing dyslexia is not the objective process that

many are led to believe, neither does it point to appropriate forms of treatment.

Nicolson mentions the heritability findings as if this were something he was pointing out, but the heritability findings were highlighted in the programme itself. He says 'the fact that 50 per cent of the variance in dyslexia is genetic means that dyslexia does have a clear and distinct basis, and hence cannot be a "myth".' In fact, they show that poor reading has a clear and distinct basis, not that dyslexia as traditionally conceived (by reading/IQ discrepancy, visual reversals, etc.) has a clear and distinct basis. He sets up the 'straw man' by saying: 'No one has ever suggested that children with generalised learning difficulties can't learn to read.' But we were actually questioning whether children with dyslexia (as traditionally defined) respond differently to intervention from those with generalised learning problems. In rejecting this, we highlighted the absence of clear evidence that there exists a particular teaching approach that is more suitable for a dyslexic subgroup than for other poor readers.

The programme did not sideswipe Nicolson's cerebellar deficit hypothesis. It neither reported nor commented on any of the theories about the underlying pathology which might explain the phonological deficit (the immediate cause of reading problems) and the comorbidity often associated with this deficit but not thought to be its cause. The documentary did report criticism of the DDAT treatment for reading problems, which claims to be based on the cerebellar deficit hypothesis. It did so because the research Nicolson refers to as supporting this complementary approach (which has been widely publicised in the media) has been subjected

## LOOKING THROUGH COLOURED LENSES

**I**N his introduction Professor Elliott was dismissive of certain ideas that highlight particular aspects of the subject. For instance he ridicules the idea of coloured lenses. This refers to a small fraction of individuals who suffer from scotopic sensitivity. They experience movement and distortion of black print on a white background, and successful treatment is offered by the use of tinted lenses or coloured overlays. Normally this is only one aspect of an individual's reading difficulties, but for some it can be a very significant feature. Scotopic sensitivity is a form of visual dyslexia, and it does exist. Specialists have highlighted its existence but no one claims that it is a complete solution. Does total agreement as to the nature or treatment of any human condition exist?

The same applies to coordination activities. Again they are not a complete answer to dyslexia, but they can help children who suffer from dyspraxia or coordination problems or dysgraphia (handwriting difficulties). Both these latter conditions are often associated with dyslexia and treating them appropriately can have a positive effect on the development of the child's literacy skills.

If the general public, as Elliott claims, falls for single therapies as a complete answer to the very complex condition of dyslexia then that is surely their fault. However, specialists in the area have never claimed this. It may be true that certain sections of the population are over-influenced by new ideas. But that is no reason to consign to oblivion the term 'dyslexia', which has been a useful administrative and legal term for many years.

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to criticism by leading researchers on both sides of the Atlantic (e.g. Snowling & Hulme, 2003; Stein, 2003).

While his point about the Code of Practice is true up to a point, I am puzzled that Nicolson doesn't recognise the more subtle ways that a dyslexic diagnosis can influence both teachers and gatekeepers to resources. Teachers are increasingly wary of litigation and may seek to protect themselves against legal challenge. It would be naive to underestimate the power of the label to access additional resources, a point recently noted by school SEN coordinators (SENCO-Forum, 2005).

Finally, I am rather surprised by the simplistic distinction between educational and 'academic' psychologists, finding this neither helpful nor meaningful. Is he, in actuality, differentiating between the diverse academic fields of cognitive and educational psychology? If so, it might be helpful if he didn't offer imprecise and inaccurate accounts of the latter discipline. Certainly, there are areas in educational psychology where ascertaining the causes of a problem (even if this were possible) is not very helpful for guiding intervention.

Our knowledge of factors that underpin reading disability has massively increased in recent years and it seems likely that brain function and genetic studies offer much for the future. Hopefully, such work will ultimately provide valuable guidance in developing increasingly effective interventions. At the current time, however, splitting poor readers into two groups – dyslexic sheep and ordinary poor-reading goats – has little practical value for dealing with literacy problems. Rather than pouring resources into dyslexic assessments, we would, at the current time, be wiser to target all poor readers at an early age for intervention. This is the main point that the programme set out to make.

**Julian Elliott**

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British Psychological Society (1999). *Dyslexia, literacy and psychological assessment*. Report of a working party of the Division of Educational and Child Psychology. Leicester: Author.

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### Primary school pupil with special glasses to help with reading

**H**AVING worked in the field of specific learning disability for over 40 years, I am still greatly upset that my colleagues are trapped in their thinking by medical titles, such as 'dyslexia', 'dyscalculia', 'dysgraphia', etc., which are merely descriptions of symptoms.

We should be looking instead for the causes of these problems. Following research in Canada connecting such problems with metabolic problems, an article in *Scientific American* (from memory, in the 1980s) found the genetic link on the X chromosome. This explains the four-to-one ratio of such problems in boys vs. girls.

I have found over the years that, when there is evidence of SLD in WISC or WAIS subtest scatter, perceptual problems in visual or auditory modalities, fine motor problems and of course reading and spelling or calculation below the level expected from the intelligence level, comprehensive tests of allergies and of vitamin and mineral trace deficiencies almost invariably find the metabolic connection. The results are so often spectacular, that teachers and parents are amazed that the client is so greatly improved in concentration and ability to learn, often in a few days.

Terms like ADD and ADHD are again merely descriptions of symptoms, which are treated by the medical profession with drugs. This does not get at the cause of the problem, and often leads to dependency.

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**T**HERE are a number of issues here that highlight what appears to be serious conceptual confusion in the field. These carve out an important agenda both for research and practice.

## ELLIOTT'S IS AN EMPOWERING MESSAGE

**P**ROFESSOR Elliott's message in the *Dispatches* programme is supported by the two major reviews of the literature, by the BPS in 1999 and the *Journal of Child Psychology and Psychiatry* in 2004.

My experience as an LEA educational psychologist is that schools and teachers feel 'disabled' by the messages about dyslexia being a discrete set of difficulties – rather like a syndrome – that needs expert diagnosis and specific learning difficulties trained teaching. The 'empowering' message that this programme gives, and which is supported scientifically by available evidence, is that there is no discrete set of difficulties that allows a 'diagnosis' of dyslexia to be made.

I personally do not like the term specific learning difficulties, following recent private psychologist reports that claim that any discrepancy in verbal/non-verbal/spatial abilities suggests SLDs. This is diagnosed, even where children are scoring well within the average range for reading and spelling. Any term that becomes so broad that it becomes vague is clearly unhelpful.

A colleague and I recently attended a local Dyslexia Association meeting. Those who are reluctant to accept that all children are 'dyslexic' who are not developing reading and spelling skills at the expected rate have other reasons for not being able to accept the programme's definition. They agree with those of us that accept the *Dispatches* message, that children need an individualised and structured teaching programme, applied often, to develop skills until they become more automatic and fluent. Where they disagree is in terms of politics. The *Dispatches* message, although empowering to schools and teachers – and ultimately parents and students, is a threat to them. It threatens their livelihood, as often they are employed as private assessors and tutors. It threatens the training courses that they attend to gain their accreditation as SpLD teachers, and it threatens their view of 'dyslexia' as a disability.

Interestingly, a member of the local association expressed her concern that children needed a 'diagnosis' of dyslexia to be able to access their teaching programmes, adding 'Are you suggesting that we allow any child with a reading and spelling difficulty to access our help?' ...Now there's an idea!

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In order to consider what is at stake, it is helpful first to refer to the important theoretical framework proposed by Morton and Frith (1995; see also Morton, 2004). According to this framework, it is important when considering developmental disorders to separate the biological, the cognitive and the behavioural levels of explanation. Importantly, it is necessary to acknowledge that developmental disorders are dynamic and there are environmental interactions at all levels. So the behavioural manifestations of disorders, such as dyslexia, change with time, and also in different contexts – for example we would see different behaviours in a child taught to read in Italian or in one who received early intervention.

The phonological deficit theory of dyslexia, featured in the documentary, is a theory at the cognitive level. It explains a constellation of behaviours that are normally associated with dyslexia (short-term memory problems, word-finding difficulties, etc.). The phonological deficit theory is a well-specified, falsifiable theory that so far has not been refuted. What many respondents are upset about is that certain

behaviours often associated with dyslexia are not explained by the theory – e.g. visual problems, problems of organisation and of motor control. Of course, it is correct that these behaviours often co-occur with dyslexia; they signal important comorbidities. Why they do is poorly

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### **‘To gather everything under the umbrella of “dyslexia” helps neither theory nor practice’**

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understood. Next steps must involve seeking both biological and cognitive explanations of these associated disorders so that ultimately we can begin to unpick what is dyslexia (the construct under threat), what is not dyslexia and why these behaviours co-occur so frequently. But, to gather everything under the umbrella of ‘dyslexia’ helps neither theory nor practice. As for the call for ‘cut-off points’ for ‘dyslexia’, we can as a profession agree criteria for extra time or a laptop computer, but it is meaningless to imagine quantitative criteria defining a dynamic

developmental disorder.

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Morton, J. (2004). *Understanding developmental disorders: A cognitive modelling approach*. Oxford: Blackwell.  
Morton, J. & Frith, U. (1995). Causal modelling. In D. Cicchetti & D.J. Cohen (Eds.) *Manual of developmental psychopathology*. New York: Wiley.

**F**OR some years I have been asking my university colleagues how they determine that a student has dyslexia, and thereby grant them extra time in examinations. None of the answers I have received are based on specific criteria and cut-off points drawn from an epidemiologically defined population, say a national sample of 18-year-olds. It would be good to update an old reference (Yule *et al.*, 1974). Obviously, if anyone has such data it would help clarify if dyslexia exists.

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Yule, W., Rutter, M., Berger, M. & Thompson, J. (1974). Over- and under-achievement in reading. *British Journal of Educational Psychology*, 44, 1–12.

## **ACKNOWLEDGING THE VISUAL DIFFICULTIES**

**P**ROFESSOR Elliott said that ‘there is no consensus about how it [dyslexia] should be defined or what diagnostic criteria should be used’. The difficulty in using this type of argument to dismiss dyslexia as a myth is that many, if not most, specific learning difficulties, psychological conditions and medical conditions are equally difficult and contentious to ‘diagnose’. Visual impairments, epilepsy, autistic spectrum disorder and the like are not ‘discrete’ entities but range in their degree from mild to severe impairment, and individuals are not uniform in the ways in which they are affected. If Elliott’s logic is applied across the board then I assume that he is also arguing that these disabilities do not exist?

Elliott said ‘a diagnosis of dyslexia tells us virtually nothing about how best the individual can be helped to become a better reader’. For many years the ACID profile of the WISC/WAIS IQ test together with

WRAT or WORD test have been used to diagnose individuals with dyslexia. The ACID profile is unusual, and those with dyslexia usually have either a full or partial profile, i.e. they are either dyslexic because of auditory short-term memory weakness (as identified by a lower score for digit span-D), visual short-term memory weakness (as identified by a lower score for coding-C) or because they have weaknesses in both domains. So rather than telling us ‘virtually nothing’ a diagnosis demonstrates in exactly which areas the student has difficulty and by implication how to support the individual’s learning.

In the programme much time was given to the impact of phonological difficulties in reading and how to support them. I very much doubt whether anybody would dispute that where phonological difficulties are present, teaching strategies should be implemented. However there was a

failure to even acknowledge visual difficulties as a possible source for reading or spelling difficulties. If there was not a visual route of word recognition; then it would not be possible for ‘normal’ people to differentiate between *wear* and *where*. We must acknowledge that visually based, phonologically based or multisensory-based teaching methods can be effective in supporting learning depending upon the individual’s areas of weakness.

There was no coverage of the unusual, yet consistently reported, soft signs of dyslexia (difficulty in learning to tell the time, telling one’s left-hand side from one’s right-hand side, etc). Explanations based purely on phonological weakness do not account for these types of difficulty.

Phonological weakness alone also fails to explain difficulties in spelling which persist in compensated dyslexic adults (including those who have been taught using the

phonological methods presented in the programme). Spelling in such adults can be haphazard; for example individuals are able to spell a word one day, but not the next.

The television programme made a comment to the effect that IQ drops in those children who do not learn to read. It would be helpful to know where this research has been published. As I understand it, an artificial drop occurs for individuals with dyslexia when they are tested on the post-16 WAIS scale purely because for the first time the digit span subtest is included in the overall calculation of the IQ score (this subtest is not used toward the full IQ score in the WISC). I would be grateful if Professor Elliott could point to any literature that documents a ‘real’ change in IQ during childhood of the type outlined in the programme.

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