

Response

Terminological debate over language impairment in children: forward movement and sticking points

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Abstract

Background: There is no agreed terminology for describing childhood language problems. In this special issue Reilly *et al.* and Bishop review the history of the most widely used label, 'specific language impairment' (SLI), and discuss the pros and cons of various terms. Commentators from a range of backgrounds, in terms of both discipline and geographical background, were then invited to respond to each lead article.

Aims: To summarize the main points made by the commentators and identify (1) points of consensus and disagreement, (2) issues for debate including the drivers for change and diagnostic criteria, and (3) the way forward.

Conclusions & Implications: There was some common ground, namely that the current situation is not tenable because it impedes clinical and research progress and impacts on access to services. There were also wide-ranging disagreements about which term should be adopted. However, before debating the broad diagnostic label it is essential to consider the diagnostic criteria and the systems used to classify childhood language problems. This is critical in order to facilitate communication between and among clinicians and researchers, across sectors (in particular health and education), with the media and policy-makers and with families and individuals who have language problems. We suggest four criteria be taken into account when establishing diagnostic criteria, including: (1) the features of language, (2) the impact on functioning and participation, (3) the presence/absence of other impairments, and (4) the language trajectory or pathway and age of onset. In future, these criteria may expand to include the genetic and neural markers for language problems. Finally, there was overarching agreement about the need for an international and multidisciplinary forum to move this debate forward. The purpose would be to develop consensus regarding the diagnostic criteria and diagnostic label for children with language problems. This process should include canvassing the views of families and people with language problems as well as the views of policy-makers.

Keywords: diagnosis, DSM-5, labels, terminology, specific language impairment.

Introduction

Tis but thy name that is my enemy.
What's in a name?

These are two of the many wonderful phrases Juliet recites to Romeo in act II scene 2 of Shakespeare's *Romeo and Juliet*. In this tale about star-crossed lovers, Juliet is telling Romeo that a name is an artificial and meaningless convention. She passionately states that she loves Romeo, not the person called Montague, the Montague

name or the Montague family. Juliet is stating that what matters is what something is, not what it is called. For the young lovers, names might not have been important, but for children and young people with language problems and their families, we argue both 'what it is' and 'what it is called' are critical. Traditionally, specific language impairment (SLI) has been defined by 'what it is not' and the commentaries in this special issue suggest we are some way from agreeing on both 'what it is' and 'what it is not'. The need to improve our communication reflects one of the main drivers for our lead

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papers. It is ironic that we struggle with this given our *raison d'être* is to address the communication needs of our clients (Grist and Hartshorne 2014).

Those working in communication sciences and disorders have noted that the 'public profile of the profession' languishes because of a lack of appropriate and consistent terminology resulting in miscommunication (Walsh 2005: 66). We agree that a consistently used nomenclature is required to facilitate communication with:

- families (Huneke and Lascelles 2014);
- individuals who have language impairments;
- professionals across the health and education sectors and all disciplines concerned with language problems;
- the media;
- policy-makers and service planners; and
- the research community(s)

to understand better what causes the problem(s), determine the prevalence and, importantly, what the most effective treatments are and when they are best delivered.

Given these diverse needs, it may be wise to consider whether a single term framed within a single system can in fact meet all these needs. Within the papers and commentaries the arguments often were driven by research interests in aetiology and causal accounts; whereas others emphasized service delivery models that focused on behaviours, needs and outcomes and explicitly discounted aetiology. As we examine the terminology we use and the conceptual frameworks within which these terms are used, we need to keep open the possibility that one system, although desirable, may not be the best solution. A logical and empirically supported system concerned with the causes of individual differences in child language development may not be suitable for informing clinical practice.

Whatever terms and classifications are developed, we do have to acknowledge that these words do matter. Clear messages have been sent from influential bodies such as the Australian Senate Enquiry into The Education of Students with Disabilities and the Australian Institute of Health and Welfare (AIHW) (2003), with the latter stating that the 'Classification and terminology used to describe speech impairments¹ are particularly fraught with inconsistency, in particular the use of different interpretations for the same terminology or different terminologies for the same meaning' (p. 55). If we want to work with and advocate for people with communication problems, then it is imperative we adopt and use consistent terminology in our communications. Put simply, we need to speak the same language.

One reason for the confusion may be the fact that we are dealing with complex and heterogeneous conditions with no clear-cut boundaries from either normality or other developmental disorders. As noted by Baird (2014), similar challenges occur in many other developmental conditions including autism spectrum disorder (ASD) (Brignell *et al.* 2014), attention deficit hyperactivity disorder (ADHD) (Batstra *et al.* 2014), and developmental dyslexia (Elliott and Grigorenko 2014). Nevertheless, while there may be debate about precise diagnostic criteria, or even whether some disorders exist, the terminology for these other conditions has remained relatively consistent and stable—far more so than for children's language disorders. Why cannot we get it right? No such arguments exist in high-profile conditions such as breast cancer. Globally people understand what this broad diagnostic term means. It is not necessary to know that behind the diagnostic label there is a myriad of subcategories concerning the (1) location, size or stage of the tumour, (2) the tumour's histological grade, (3) lymphovascular invasion and (4) presence or absence of certain receptors that sit on the surface of the tumour cells. Recent developments suggest there are also multiple molecular subtypes of breast cancer, and in January 2014 a new classification system was proposed that stratifies breast cancers into one of four groups based on whether the cells possess receptors for other molecules (e.g. androgen and vitamin D) (Natrajan *et al.* 2014). These are critical to determining and personalizing intervention that is increasingly targeted. None of this has changed the broad diagnostic label but it has changed the information provided to those with breast cancer, the choices they have and it is certainly revolutionizing treatment and prognosis. The highly successful breast cancer campaigns speak with a unified voice. In other words, there is public terminology (used for lobbying and advocacy, media, political and legislative purposes as well as fund-raising) and terminology used by the profession or the field (for diagnostic, classification and management purposes in the clinic and research setting and with families). While the broad diagnostic label has remained the same, both the diagnostic criteria and classification have changed markedly over the past 10–20 years as new discoveries have been made.

Our lead articles suggest it is time to reconsider our labels and diagnostic criteria for children's language difficulties. In particular, we need to take a critical look at the most widely used diagnostic label, 'specific language impairment' (SLI). Controversy over this term has been increased by its replacement in the DSM-V system with the term 'language disorder'.

Childhood language problems have much in common with childhood obesity. Language difficulties are as prevalent, or even more prevalent, than obesity,

depending on the definition adopted. They have equally serious, yet different long-term impacts on health and well-being. Yet language problems, regardless of which label is currently applied, are not headline indicators for governments around the world. We argue this will remain the case because our arguments about unmet needs will not be heard unless we meet the challenge to develop and adopt nomenclature that is used consistently to facilitate clear communication.

Points of consensus and disagreement

Our commentators represented a wide range of backgrounds, both in terms of discipline and geographical location. They included researchers investigating the origins of children's language problems, practitioners concerned with identifying and remediating language problems, and representatives of organizations that offer support and legal advice to families affected by such problems. We were impressed that despite this diversity, there was broad agreement on a number of key points:

- Some children have serious and persistent language problems that need to be identified.
- Children who enter school with poor language abilities have a very high risk for poor literacy and academic outcomes throughout the school years.
- These language problems are often not identified or treated unless they are accompanied by other conditions, including speech sound disorder.
- Language problems commonly co-occur with other neurodevelopmental problems. It does not make sense to focus on 'pure' cases who have no other difficulties. Likewise, we need to acknowledge that pure cases, particularly in milder forms, are common and carry the risks for poor outcomes mentioned above.
- There is no scientific support for incorporating measures of nonverbal intelligence in criteria for language impairment.
- Diagnostic labels are necessary for identifying those in need of additional help, but we need to be aware of potential disadvantages of labelling, including stigmatization and low expectations.
- Too many different labels have been used to describe developmental language problems and failure to adopt agreed nomenclature has had serious consequences.

Several commentators also called for a global working party to provide recommendations to the international community on nomenclature and criteria for children's language impairments. In addition, it was proposed that to address these issues we required multi-agency collaboration, to recognize that language prob-

lems are at the interface of education, medicine, speech and language therapy, psychology, psychiatry and policy. Wright (2014), writing from a legal perspective, notes how confusion in terminology leads to many children being denied services by local authorities, with endless tribunal hearings arguing about whether a child does or does not have a particular type of disorder.

While nearly everyone agreed there was a problem that urgently needed fixing, there was less agreement over the solution. The three main issues for debate concerned:

- What factors should be taken into account as drivers of change?
- What are appropriate criteria to use when identifying developmental language problems?
- What terminology should we adopt?

Issues for debate

The drivers for change

If we accept that the current situation is not satisfactory, we need to move on to think about what the drivers might be for change. Key to this question is the question of the purpose of classification. As Rutter (2014) points out, we need to distinguish between meeting criteria for a diagnosis and needing treatment. Although these often overlap, they are not identical, yet in practice a diagnostic label is often seen as mandatory if a child is to receive intervention. This can be a point of tension between those working in education and those adopting a medical model. As Lauchlan and Boyle (2014) accept, there is a risk that if we were to abandon diagnostic labels, then children's needs may be neglected. But they point out that the diagnostic label is often given far more status than it deserves. In particular, it is often assumed that the aetiology of a language problem will affect how it should be treated, yet there is little hard evidence on this point. In a similar vein, Bellair *et al.* (2014) suggest that a child's care pathway is usually more dependent on the presenting problem rather than the presence or absence of an associated condition. This is a key issue for those who argue for abandoning traditional exclusionary criteria. As we discuss further below, the fact that we have always had them is not sufficient grounds for retaining them. In practice, as noted by several commentators, we are often up against financial constraints because the resources to provide help to children are limited, but while this may force us to look critically at criteria for allocating resources, it does not mandate continuing to use criteria that have been shown to be invalid.

In some commentaries concern was expressed that broadening of diagnostic criteria would lead to reduction of services to some children. We acknowledge this

is a real fear in a time of stringent cost-cutting. However, there is an equally valid concern that our current criteria do a disservice to many children who are deemed not to merit services, even though they both need and may benefit just as much as others.

Research has an important role to play in determining how the field should move ahead, but in our view, should not ignore practice. Snowling (2014) argues that 'SLI is the term most often used by researchers and surely research should guide practice'. However, a key question is whether the children included in research studies are representative of the children in the population who require support. In fact, because researchers so frequently focus only on children with specific difficulties, we know rather little about others with a broader range of problems. It has in the past been accepted as a given that those with specific problems are qualitatively distinct from those with more general problems, and that they have a different prognosis. However, where these children have been included in studies, we find that they appear to be similar in terms of underlying cognitive impairments, aetiology, response to intervention and outcomes (Bishop 1994; Tomblin 2008). Whitehouse (2014) outlines clearly the responsibilities of the researcher in these situations and draws interesting parallels with the ongoing debate in ASD. Thus, while we agree with Snowling (2014) that research needs to inform practice, we also know from studies such as that of Broomfield and Dodd (2004), that narrowly defined SLI does not correspond to the caseload in clinical practice. In research, there are advantages to controlling potential confounders in order to aid interpretation of results. These conditions do not hold for the clinician. Not only do we have many children who do not meet a narrow definition but who nevertheless have a valid clinical need, but we also know that many children change from a 'specific' to a 'nonspecific' form of impairment as they grow older (Conti-Ramsden *et al.* 2001), further challenging the validity of the traditional research definition. Clearly a consultative and sustainable knowledge cycle that links evidence and practice is essential.

A number of commentaries mention the need for service models to identify needs and support based on (1) who will be negatively affected by language problems, and (2) whether these children will respond to intervention in terms of a reduction in their impairment and/or reduction in negative effects on individual's experience of disability (i.e., activity and participation limitations and restrictions; development of negative sequelae). The challenge is to build these responses into the design and delivery of educational, health and social care systems. Meeting these needs is not the concern solely of the speech pathology professional, as both Parsons *et al.* (2014) and Dockrell and Lindsay (2014) highlight. Evidence-based, holistic, life-span models are required

which involve a range of professional groups at different stages in the child and young person's life.

What are the appropriate criteria to use when identifying language problems?

We agree with Rutter's (2014) suggestion that first we have to ask 'what is the concept' and then to determine 'what term we want to use to describe it'. Tinkering with the label will not solve the fundamental problem.

We suggest that diagnostic criteria for children with language problems needs to take into account the following criteria:

- The features of language.
- The impact the impairment has on functioning and participation.
- The presence/absence of other impairments, including those of known and unknown aetiology.
- The language trajectory or language pathway and age of onset.

When more is known about the genetic and neural bases for language impairment then these too should be incorporated into the diagnostic criteria.

The features of language

In terms of language features, the current authors and many commentators were divided on how far it was feasible and desirable to identify inclusionary criteria in terms of 'language markers'. That is, can we find and employ particular measures of language that provide high levels of sensitivity and specificity with regard to a child's membership in a subgroup of children with language impairment. The positive case was made by Rice (2014), who argued that the grammatical property of finiteness marking was highly effective in distinguishing language problems arising from different causes. Another language marker, poor non-word repetition, also seems not only to be sensitive to language problems, but to be useful for identifying children whose language or reading problems appear to have a strong heritable basis (Bishop *et al.* 1996, 2004). Note that both these markers are largely independent of nonverbal ability. A counter argument for an emphasis on a specific set of language markers is that, while they may help pinpoint heritable disorders, there is no evidence that they are of clinical relevance in terms of identifying those most in need of intervention, or most likely to have poor outcomes. The full range of functional difficulties, including vocabulary and discourse, as well as grammar, should be the target of clinical intervention. Thus, it would not make sense to say that we would only recognize problems that were picked up by these measures. The concern, however, is that a more global approach

to identification of language problems could lead to a lumping together of a heterogeneous group of children, losing sight of information that could be of importance for prognosis and intervention. The evidence base concerning the degree to which there are subgroups that need to be distinguished is still limited. Although we assume there are subtypes of children with different forms of developmental language impairment, these often do not survive empirical tests (Bishop *et al.* 2000; Rapin *et al.* 1996; Tomblin and Zhang 1999). Nevertheless, our failure to find subtypes to date does not mean they do not exist since we may not have looked in the right way.

The impact of language problems on functioning and participation

Several commentaries highlighted this issue, either implicitly or explicitly. We cannot equate a low score on a language measure with functional impairment. Indeed, the very characteristic that makes a measure such as non-word repetition useful in genetic studies—its ability to identify cases of resolved language impairment—makes it a poor measure for functional purposes, because it is clear that many children manage to cope well despite having a weakness in this area. Developing reliable and valid measures of functional impact of language problems, so that we can use these in clinical decision-making, is an urgent priority for the field.

The presence and absence of other impairments

This issue was a key point of difference between some commentators, relating as it does to the whole question of whether exclusionary criteria should be used in identifying or classifying children's language problems. Some took issue with the conceptualization of exclusionary factors that was adopted by Reilly *et al.* (2014). Leonard (2014), in particular, noted that it is not usual to rule out cases who have atypical findings on neurological investigations, unless they have brain damage, and low SES and bilingualism are not normal exclusions. Other exclusions were more conventional, but nevertheless controversial.

What would be the consequences of dropping all exclusions? Potentially the term 'language impairment' could apply to children with autistic spectrum disorder, hearing loss, English as an additional language, speech disorders secondary to cleft palate, those with neurological aetiologies such as Landau-Kleffner syndrome or head injury, as well as those who would fit into the category of SLI. Lauchlan and Boyle (2014) rightly point out that there is not much hard evidence to support the idea that such children require different approaches to intervention, but research on the nature of language impairments does indicate that they may have different barriers

to effective functional communication. Consider three specific examples. First, as Hansson *et al.* (2014) pointed out, there may be some similarities in the language problems of children with mild-to-moderate hearing loss and those with SLI, but research by Briscoe *et al.* (2001) suggested that whereas hearing-impaired children appeared to benefit from introduction to literacy, which could provide visible cues that helped them with language acquisition, most of those with SLI found learning to read extremely challenging. Such knowledge might suggest capitalizing on written language as a route into better language would work for the hearing impaired, but not for those with SLI. Second, for children whose first language is different from the language of schooling, it is important to establish whether poor performance in the ambient language is part of a broader language impairment that also affects the home language. If so, it may be effective to focus intervention on the child's first language (Kohnert 2010). Third, whereas some children with autistic spectrum disorder have problems with language structure that resemble those seen in SLI, there is growing evidence that the underlying cognitive cause of this problem is different in the two conditions (Williams *et al.* 2008), suggesting that different remedial approaches will be required. This does not mean we should conclude that a child can never have more than one problem, or that an intervention that is effective for one group is bound to be ineffective for another.

Just as we have found with IQ-discrepancy criteria, ultimately our decision to retain or drop exclusionary criteria must depend on empirical data. If the same language problems can be the final common path of a range of causal pathways, then it may not make sense to separate them, especially if the purpose of diagnosis is to guide intervention. However, we need to be aware that language problems that look superficially similar may turn out to be different when assessed with more fine-grained instruments, in which case it would be premature to ignore information about co-occurring conditions (cf. Williams *et al.* 2008). Perhaps in our current state of knowledge it would be sensible to adopt Rutter's (2014) proposal that additional factors, such as a specific genetic syndrome, should be incorporated in an additional descriptive text, rather than be regarded as part of diagnostic criteria.

Language trajectories and language pathways

Several authors stressed that developmental language problems are not static. Their nature changes with age, and this needs to be taken into account when considering criteria for identifying difficulties. One key point to emerge from this debate is that identifying language problems is the business of both the health and education sectors and models are required that permit an appraisal of language skills during different points of

development, including the preschool and early school years.

Early intervention is commonly seen to be highly desirable, but it is constrained by difficulties of identifying which children have persistent problems and which are likely to resolve of their own accord. We agree with Norbury (2014) that the methods used to identify young children with language problems need to be improved if early intervention is to be successful. As Brignell *et al.* (2014) note when discussing ASD, those advocating early intervention typically make several key assumptions that may not be warranted:

- We know what language impairment is.
- We can correctly identify language impairment early.
- We know the developmental trajectory of language impairment when diagnosed early.
- We know that early intervention improves the outcome, beyond what is expected by developmental trajectory, for all children identified.

One obvious way forward is to build risk models of early language trajectories. These would incorporate the red flags mentioned by Norbury (2014). These approaches would (1) enable us to discriminate children likely to have persistent language trajectories from those with transient problems and (2) address Norbury's concern about having sufficient resources to expend on children with transient problems. The only way to address this is to use the powerful resources available in longitudinal studies around the world to explore these models, as in the Norwegian Mothers and Child Cohort Study of more than 10 000 children between the ages of 3 and 5 years (Zambrana *et al.* 2014).

What terminology should we adopt?

Our focus here is on terminology for children's unexplained language difficulties, and we do not consider further the term 'speech, language and communication needs' (SLCN). This term was used in the Bercow Report (Bercow 2008) and now is widely used in educational contexts in the UK, though not in North America or Australia. Although it includes language impairment, it is much broader than this, including a wide range of problems that have different causes and intervention needs, such as stuttering and voice disorders. In addition, as defined by Bercow, it also covers secondary problems associated with conditions such as autism, cerebral palsy and hearing loss.

The papers by Bishop (2014) and Reilly *et al.* (2014) made specific points about the pros and cons of different terminology for unexplained language problems, and the commentaries gave some additional arguments.

We feel that some of these were strong enough to rule out three of the potential labels for children's language problems, as follows.

Language delay

None of the commentators favoured this term. There were three strong arguments against it. First, we need to bear in mind that children with language difficulties grow up to be adults who may still have difficulties that need recognition. We need therefore to have a term that highlights the dynamic, changeable nature of the condition. Second, 'delay' is confusing because it implies eventual catch-up in skills, which is not typically what is seen. And finally, it seemed that this term is often used to deny services to children by those who draw a distinction between 'delay', where the child's language is uniformly behind age level, and 'disorder' where there is an uneven profile (Wright 2014). As noted by Bishop (2014), this distinction has no validity as an indicator of either aetiology or prognosis, and accordingly, we unambiguously recommend that this term be abolished.

Primary language impairment

Bishop (2014) suggested this term might be a useful alternative to unadorned 'language impairment', but the points made by commentators reveal that it is not interpreted in a consistent fashion. For a start, as Clark and Carter (2014) noted, in the UK, 'primary school' refers to schools for children under 12 years of age, so there is potential for misunderstanding it to indicate a child's age. Second, several commentators interpreted 'primary language impairment' as meaning that the language impairment was the child's primary problem. This is a subtly different meaning from the one intended by Bishop (2014), which was that the language impairment was not secondary to another condition. In addition, as pointed out by Conti-Ramsden (2014), it is not always easy to judge which condition is primary in this sense when the child has more than one area of impairment. For these reasons, we recommend against the use of this term.

Language disorder

Although this is the preferred terminology in DSM-5, Bishop (2014) argued against it on the grounds that if entered in a search engine, it would yield many results that were unrelated to children's unexplained language difficulties. In effect, it identifies a symptom that can arise for many different reasons, and so is over-inclusive. To establish how serious this might be, 'language disorder' was entered as a search term in the Web of Science database and the titles of the first 100 returns were scru-

tinized to see if they referred to children's unexplained language problems. Just under half were relevant. The remainder focused solely on other conditions, specifically: ADHD ($N = 1$), ageing ($N = 1$), Alzheimer disease ($N = 2$), aphasia ($N = 2$), autism ($N = 11$), bilingualism ($N = 1$), brain tumour ($N = 1$), childhood stroke ($N = 1$), cobalim C deficiency ($N = 1$), encephalitis ($N = 2$), epilepsy ($N = 7$), fragile X ($N = 1$), frontotemporal dementia ($N = 1$), hearing loss ($N = 1$), hyperthyroidism ($N = 1$), mood disorder ($N = 1$), neurogenic communication disorder ($N = 1$), nosocomial infection ($N = 1$), primary progressive aphasia ($N = 5$), schizophrenia ($N = 6$), sexual abuse ($N = 1$), subjective cognitive complaints ($N = 1$) and Tourette syndrome ($N = 1$).

The remaining terms elicited much more varied reactions from commentators.

Specific language impairment (SLI)

Bishop (2014) presented data to show this was the most widely used term in the English-speaking research literature, but others noted that it is less familiar to those in clinical contexts. Rice (2014) noted that SLI was a research priority area for the US National Institute for Deafness and Other Communication Disorders (NIDCD), and that this had been a fruitful category in terms of research progress.

Reilly *et al.* (2014), in contrast, argued that the term 'SLI':

- Does not reflect the heterogeneity of language problems.
- Does not describe the majority of the children with language problems.
- May as a result deny access to services to children who do not fit the narrow diagnostic criteria.
- Has variable support among the scientific and clinical community.
- Causes confusion amongst clinicians, families and policy-makers.

Many commentators agreed that this term was too restrictive if used in a strict sense that required the child to have a substantial mismatch between nonverbal ability and language level, and to have no other exclusionary criteria. They were, however, divided as to how best to deal with this. Around half of them supported Bishop's (2014) proposal that we could retain the term but redefine it so that 'specific' was taken to mean 'idiopathic', allowing us to retain familiar terminology, which could also ensure a link with an existing body of research. Taylor (2014), for instance, commented that 'Rather than changing the term SLI, the definition can be updated to include children whose most conspicuous, but

not their only, developmental difference is in the language domain'. Others, however, felt that this would be too confusing, because use of this term would encourage people to persist with inappropriate exclusionary criteria, and that a change was therefore needed.

On this point, it may be worth noting that there are some precedents for retaining a label while redefining how it is used. For instance, the diagnostic criteria for autistic disorder broadened markedly between 1980 and 1994 (Gernsbacher *et al.* 2005). This does not seem to have led to particular problems in clinical settings, but it has created major problems in epidemiology, as it is extremely hard to judge whether an increase in prevalence of autism is genuine or just reflects more liberal diagnostic criteria. As Baird (2014) notes, the criteria for ASD have recently changed again in DSM-5, in the light of research evidence that some diagnostic distinctions were not valid. Fletcher (2009) noted that the concept of 'dyslexia' has changed over the years so that the notion of a discrepancy between reading level and IQ is no longer part of the definition. However, changes in definition can be confusing for those who are familiar with the original, more restrictive meaning. This is likely to be exacerbated in the case of SLI, where 'specific' has potential for different interpretations.

Is there a balance between acting and not acting? Gallagher (2014) raises concerns about the impact of removing a diagnostic label that affected individuals have come to identify with. However, we have new knowledge from population studies that was not available when the term originated. Of course, we need to be sensitive to the fact that for many people labels have connotations that go far beyond a simple definition. As Bishop (2014) argued, a label can give a person a sense of identity and worth, and make them feel their problems are validated. Nevertheless, retention of labels that hinder communication cannot be justified, and if the evidence demands it, we need to reconsider our terminology. If we retain labels solely on the grounds that they have been used for a long time, we would never be able to progress in the light of new knowledge, and would still be using diagnostic terms such as 'minimal brain damage'.

Language impairment

The solution of simply dropping the 'specific' part of the SLI label appealed to many commentators. It is noteworthy that language impairment is almost universally employed by State Departments of Education in the United States as one of the special education categories. Language impairment in this case is always listed in parallel with other categories such as autism, intellectual disability, hearing impairment and specific learning disability. Usually, language impairment refers to the presence of poor language, but does not require that it

be distinct from these other conditions. Thus, language impairment may or may not occur in conjunction with other conditions.

Bishop (2014) argued against this term for the same reason as 'language disorder'. It is hopeless as a search term because it generates too many false positives. The exercise of searching for the first 100 returns from Web of Science was repeated using 'language impairment' as the topic search term. This yielded 68 returns that could be construed as broadly or potentially relevant to unexplained language problems in children. The remainder focused on other conditions, predominantly autism, acquired language disorders in adults, or hearing impairment.

In addition, several commentators noted that in the absence of any additional modifier, the term 'LI' would encompass a much wider range of cases than most other terms, but they differed in terms of whether they thought this was a good or bad thing. Huneke and Lascelles (2014) were concerned that this broadening of the diagnostic category would simply mean that scarce resources would be spread across a greater range of children, with the notion of language impairment as a specific need disappearing. Gallagher (2014) expressed similar concerns, arguing that it would be unethical simply to remove a diagnostic distinction that many were familiar with, and that we would in effect be 'abandoning a whole clinical and research history before we know how to rewrite it'. Snowling (2014) was concerned that it was important to convince policymakers of the primary needs of children with language impairments, and that by abandoning the term 'SLI' we might risk throwing the baby out with the bathwater by removing a term that was useful in advocacy. Rice (2014) stressed the negative consequences of abandoning a term that had served researchers well, and Leonard (2014) noted the confusion that could ensue if, for instance, we attempted to contrast children with LI and those with autism—who might or might not have additional LI.

Others argued that a benefit of the term 'LI' was that, while it had much in common with the term 'SLI', it did not carry connotations of specificity which were often unjustified, and could lead to children being denied services (Strudwick and Bauer 2014). Note that this argument is the mirror image of that proposed by Huneke and Lascelles (2014), who argued that there should be some demarcation between those with primarily language problems and children with broader intellectual limitations. Another argument in support of LI was the fact that it was already being used in the research literature by researchers such as Tomblin and Nippold (2014) and Bishop and McDonald (2009), who recognized the lack of justification for use of IQ criteria.

Essentially, this line of argument comes back to the extent to which it is reasonable to incorporate at least some exclusionary criteria in a definition. If we aban-

don them altogether, we will increase both the number of children we include in the category, and the heterogeneity of the group. Whitehouse (2014) acknowledges this fact but argues we nevertheless need to take this step in order to 'shift health and educational services from a diagnostic-based funding paradigm to a model based on the level of functional impairment'.

Developmental dysphasia

Huneke and Lascelles (2014), representing a parental perspective, came down in favour of 'developmental dysphasia', noting: 'it is clearly a medical term; it equates SLI with other specific learning difficulties such as dyslexia and dyspraxia'. It also works well as a search term and is the standard label in many non-English speaking countries.

However, we note that many would object to both parts of this term: as discussed below, some object to 'developmental' as unsuitable for older children and adults, and 'dysphasia' is seen as misleading precisely because it has medical connotations, when there is no clear neurological basis to most cases of language impairment. While we can see the reasons behind this preference, we doubt it would be acceptable to many in the field of education, who are already concerned about medicalization of children's developmental difficulties.

Developmental language disorder/impairment

'Developmental language disorder' is likely to be adopted in ICD-11 as the preferred term for children's unexplained language difficulties (Baird, personal communication). Several commentators thought this was a useful label, stressing as it does the congenital nature of a language problem. In general, there were relatively few objections to this term, but one point that was raised was whether it was suitable for older children and adults. In traditional classification systems, 'developmental' generally marks a contrast from 'acquired', and does not imply anything about the age of the affected individual; however, one can see that this label might be misinterpreted by lay persons, and seen as inappropriate for older children and adults. Clark and Carter (2014) suggested that affected individuals might want to drop the 'developmental' part of the label as they grew older, much as often happens with 'developmental dyslexia' in adulthood.

Language learning impairment

Not many commentators discussed this term, but reactions from those who did were broadly positive, noting that it stresses learning and was education-friendly. The only negative came from Huneke and Lascelles (2014) who reported that a small group of parents who were

Table 1. Main advantages and disadvantages associated with specific labels

Label	Current use	Incorporates exclusion	Suitable for adults	Good search term	Other
Language delay		No	No	No	Implies invalid distinction from 'disorder'. Implies problems will resolve
Primary language impairment		Yes	Yes	Yes	'Primary' open to multiple interpretations
Language disorder	DSM-5	No	Yes	No	Corresponds to symptom seen in many conditions
Specific language impairment	NIDCD	Yes	Yes	Yes	Would need redefining to be valid
Language impairment		No	Yes	No	Corresponds to symptom seen in many conditions
Developmental dysphasia	Common in Europe	Yes	Yes	Yes	Medical connotations
Developmental language disorder	ICD-11	?	?	Yes	Parallel with 'developmental dyslexia' etc
Language learning impairment		No	Yes	Yes	Focus on learning of language. Potential confusion with learning disability. May imply school learning only

surveyed disliked the term because they felt it would be seen as equivalent to low ability.

Table 1 aims to summarize the main issues that commentators were concerned with. We stress that we do not think that this debate should be treated as a vote. One thing that is clear from the discussion is that different constituencies have different priorities and concerns, and the important thing will be to balance these. The wide diversity of views suggest that we may end up having to settle for the 'least bad' term.

Future directions

We agree with those commentators who suggest that we need to have an international and multidisciplinary forum to take forward the momentum generated by this debate.

The goal of the panel should be first to build consensus about the diagnostic criteria and second the diagnostic label. We recommend using the many existing global collaborations to bring clinicians and researchers together. The views of families and people with language problems should be sought as well as those of policy-makers. Given the notable overlaps between developmental language difficulties and other neurodevelopmental disorders (Bishop and Rutter 2008), it would make sense also to gather views from those who see children with a broader range of conditions, such as ADHD, developmental coordination disorder and developmental dyslexia.

Consensus should be built around the best evidence currently available; it is important that participants set

aside any vested interests. The outputs of this panel might take the form of a position statement and technical paper such as those on 'Childhood Apraxia of Speech' (American Speech–Language–Hearing Association (ASHA), 2007a, 2007b).

Ultimately we are working towards a diagnostic label that is a superordinate heading or overarching term that describes the problem(s) and works for services, for families and for individuals. This label should be supported by a scaffold that is the diagnostic classification system. This should not be set in stone but change as knowledge becomes available. It should also adapt to encompass an individual's changing profile and needs across the lifespan. As Callard *et al.* (2013) put it: 'Diagnosis allows problems to be quantified and tracked over time and space. A diagnostic classification, well defined, is the starting point to research into causes, consequences, and solutions ...' (p. 2).

In conclusion, we do not have all the answers for this complex topic, but we are pleased to find that, despite points of disagreement, there is some common ground between the current authors and the range of commentators who offered their views. Our aim in this overview is to identify the remaining points of disagreement and to summarize arguments for and against different viewpoints, so that we will be able to move the debate forward.

The authors would welcome further commentary on this article. A discussion forum for this purpose is available at: http://www.rcslt.org/news/news/2014_news_archive/ijlcd_discussion_forum

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Note

1. Used to refer broadly to speech and language impairments.

References

- AMERICAN SPEECH–LANGUAGE–HEARING ASSOCIATION, 2007a, *Childhood Apraxia of Speech*. Position Statement (available at: <http://www.asha.org/policy>).
- AMERICAN SPEECH–LANGUAGE–HEARING ASSOCIATION, 2007b, *Childhood Apraxia of Speech*. Technical Report (available at: <http://www.asha.org/policy>).
- AUSTRALIAN INSTITUTE OF HEALTH AND WELFARE (AIHW), 2003, *Disability Prevalence and Trends*. Disability Series. AIHW Cat. No. DIS 34 (Canberra, ACT: AIHW).
- BAIRD, G., 2014, Lumping, splitting, drawing lines, statistical cut-offs and impairment. Commentary on Bishop, D. V. M., Ten questions about terminology for children with unexplained language problems. *International Journal of Language and Communication Disorders* **49**, 381–415. doi: 10.1111/1460-6984.12101.
- BATSTRA, L., NIEWEG, E. and HADDERS-ALGRA, M., 2014, Exploring five common assumptions on attention-deficit/hyperactivity disorder. *Acta Paediatrica*, **103**, 696–700.
- BELLAIR, J., CLARK, S. and LYNHAM, S., 2014, Can any label work for both intervention and research purposes? Commentary on Bishop, D. V. M., Ten questions about terminology for children with unexplained language problems. *International Journal of Language and Communication Disorders* **49**, 381–415. doi: 10.1111/1460-6984.12101.
- BERCOW, J., 2008, *The Bercow Report: A Review of Services for Children and Young People (0–19) with Speech, Language and Communication Needs* (Nottingham: DCSF Publ.) (available at: <http://www.dcsf.gov.uk/bercowreview>).
- BISHOP, D. V. M., 1994, Is specific language impairment a valid diagnostic category? Genetic and psycholinguistic evidence. *Philosophical Transactions of the Royal Society, Series B*, **346**, 105–111.
- BISHOP, D. V. M., 2014, Ten questions about terminology for children with unexplained language problems. *International Journal of Language and Communication Disorders* **49**, 381–415.
- BISHOP, D. V. M., ADAMS, C. V. and NORBURY, C. F., 2004, Using nonword repetition to distinguish genetic and environmental influences on early literacy development: a study of 6-year-old twins. *American Journal of Medical Genetics*, **129**, 94–96.
- BISHOP, D. V. M., BRIGHT, P., JAMES, C., BISHOP, S. J. and VAN DER LELY, H. K. J., 2000, Grammatical SLI: a distinct subtype of developmental language impairment? *Applied Psycholinguistics*, **21**, 159–181.
- BISHOP, D. V. M. and McDONALD, D., 2009, Identifying language impairment in children: combining language test scores with parental report. *International Journal of Language and Communication Disorders*, **44**, 600–615.
- BISHOP, D. V. M., NORTH, T. and DONLAN, C., 1996, Nonword repetition as a behavioural marker for inherited language impairment: evidence from a twin study. *Journal of Child Psychology and Psychiatry*, **37**, 391–403.
- BISHOP, D. and RUTTER, M., 2008, Neurodevelopmental disorders: conceptual issues. In M. Rutter, D. Bishop, D. Pine, S. Scott, J. Stevenson, E. Taylor and A. Thapar (eds), *Rutter's Child and Adolescent Psychiatry* (Oxford: Blackwell), pp. 32–41.
- BRIGNELL, A., MORGAN, A. T., WOOLFENDEN, S. and WILLIAMS, K., 2014, How relevant is the framework being used with autism spectrum disorders today? *International Journal of Language and Communication Disorders*, **16**(1), 43–49.
- BRISCOE, J., BISHOP, D. V. M. and NORBURY, C. F., 2001, Phonological processing, language, and literacy: a comparison of children with mild-to-moderate sensorineural hearing loss and those with specific language impairment. *Journal of Child Psychology and Psychiatry*, **42**, 329–340.
- BROOMFIELD, J. and DODD, B., 2004, Children with speech and language disability: caseload characteristics. *International Journal of Language and Communication Disorders*, **39**, 303–324.
- CALLARD, F., BRACKEN, P., DAVID, N. and SARTORIUS, N., 2013, Has psychiatric diagnosis labeled rather than enabled patients? *British Medical Journal*, **347**, f4312.
- CLARK, A. and CARTER, G., 2014, What should we call children with unexplained language difficulties? A practical perspective. Commentary on Bishop, D. V. M., Ten questions about terminology for children with unexplained language problems. *International Journal of Language and Communication Disorders* **49**, 381–415. doi: 10.1111/1460-6984.12101.
- CONTI-RAMSDEN, G., 2014, What should we call children who struggle to talk? Taking a developmental, global perspective of diagnostic labels—reflections on Bishop (2014). Commentary on Bishop, D. V. M., Ten questions about terminology for children with unexplained language problems. *International Journal of Language and Communication Disorders*, **49**, 381–415. doi: 10.1111/1460-6984.12101.
- CONTI-RAMSDEN, G., BOTTING, N., SIMKIN, Z. and KNOX, E., 2001, Follow-up of children attending infant language units: outcomes at 11 years of age. *International Journal of Communication Disorders*, **36**, 207–219.
- DOCKRELL, J. and LINDSAY, G., 2014, The view from the chalk face. Commentary on Reilly, S., Tomblin, B., Law, J., McKean, C., Mensah, F. K., Morgan, A., Goldfeld, S., Nicholson, J. M. and Wake, M., 2014, Specific language impairment: a convenient label for whom? *International Journal of Language and Communication Disorders*, **49**, 416–451. doi: 10.1111/1460-6984.12102.
- ELLIOTT, J. G. and GRIGORENKO, E. L., 2014, *The Dyslexia Debate* (Cambridge: Cambridge University Press).
- FLETCHER, J. M., 2009, Dyslexia: the evolution of a scientific concept. *Journal of the International Neuropsychological Society*, **15**, 501–508.
- GALLAGHER, A., 2014, What's in a name? Some thoughts on Reilly et al. (2014). Commentary on Reilly, S., Tomblin, B., Law, J., McKean, C., Mensah, F. K., Morgan, A., Goldfeld, S., Nicholson, J. M. and Wake, M., 2014, Specific language impairment: a convenient label for whom? *International Journal of Language and Communication Disorders*, **49**, 416–451. doi: 10.1111/1460-6984.12102.
- GERNSBACHER, M. A., DAWSON, M. and GOLDSMITH, H. H., 2005, Three reasons not to believe in an autism epidemic. *Current Directions in Psychological Science*, **14**, 55–58.
- GRIST, M. and HARTSHORNE, V. M., 2014, Please! No more spaghetti . . . Commentary on Reilly, S., Tomblin, B., Law, J., McKean, C., Mensah, F. K., Morgan, A., Goldfeld, S., Nicholson, J. M. and Wake, M., 2014, Specific language impairment: a convenient label for whom? *International Journal of Language and Communication Disorders*, **49**, 416–451. doi: 10.1111/1460-6984.12102.

- HANSSON, K., SANDGREN, O. and SAHLEN, B., 2014, Changing labels for a concept in change. Commentary on Bishop, D. V. M., Ten questions about terminology for children with unexplained language problems. *International Journal of Language and Communication Disorders*, **49**, 381–415. doi: 10.1111/1460-6984.12101
- HUNEKE, A. and LASCELLES, L., 2014, Terminology mayhem: why it matters—the ramification for parents and families. Commentary on Bishop, D. V. M., Ten questions about terminology for children with unexplained language problems. *International Journal of Language and Communication Disorders*, **49**, 381–415. doi: 10.1111/1460-6984.12101
- KOHNERT, K., 2010, Bilingual children with primary language impairment: issues, evidence and implications for clinical actions. *Journal of Communication Disorders*, **43**, 456–473.
- LAUHLAN, F. and BOYLE, C., 2014, To label or not to label: Is this the question? Commentary on Bishop, D. V. M., Ten questions about terminology for children with unexplained language problems. *International Journal of Language and Communication Disorders*, **49**, 381–415. doi: 10.1111/1460-6984.12101
- LEONARD, L., 2014, Replacing one imperfect term with another. Commentary on Reilly, S., Tomblin, B., Law, J., McKean, C., Mensah, F. K., Morgan, A., Goldfeld, S., Nicholson, J. M. and Wake, M., 2014, Specific language impairment: a convenient label for whom? *International Journal of Language and Communication Disorders*, **49**, 416–451. doi: 10.1111/1460-6984.12102
- NATRAJAN, R., WILKERSON, P. M., MARCHIÒ, C., PISCUOGLIO, S., N. G. C. K., WAI, P., LAMBROS, M. B., SAMARTZIS, E. P., DEDES, K. J., FRANKUM, J., BAJRAMI, I., KOPEC, A., MACKAY, A., A'HERN, R., FENWICK, K., KOZAREWA, I., HAKAS, J., MITSOPOULOS, C., HARDISSON, D., LORD, C. J., KUMAR-SINHA, C., ASHWORTH, A., WEIGELT, B., SAPINO, A., CHINNAIYAN, A. M., MAHER, C. A. and REIS-FILHO, J. S., 2014, Characterization of the genomic features and expressed fusion genes in micropapillary carcinomas of the breast. *Journal of Pathology*, **232**(5), 553–565.
- NORBURY, C. F., 2014, Language Impairment: where do we draw the line? Commentary on Reilly, S., Tomblin, B., Law, J., McKean, C., Mensah, F. K., Morgan, A., Goldfeld, S., Nicholson, J. M. and Wake, M., 2014, Specific language impairment: a convenient label for whom? *International Journal of Language and Communication Disorders*, **49**, 416–451. doi: 10.1111/1460-6984.12102
- PARSONS, S., JORDAN, E. and BRANAGAN, A., 2014, Changes to specific language impairment: the service perspective. Commentary on Reilly, S., Tomblin, B., Law, J., McKean, C., Mensah, F. K., Morgan, A., Goldfeld, S., Nicholson, J. M. and Wake, M., 2014, Specific language impairment: a convenient label for whom? *International Journal of Language and Communication Disorders*, **49**, 416–451. doi: 10.1111/1460-6984.12102
- RAPIN, I. C., ALLEN, D. A., ARAM, D. M., DUNN, M. A., FEIN, D., MORRIS, R. and WATERHOUSE, L., 1996, Classification issues. In I. Rapin (ed.), *Preschool Children with Inadequate Communication: Developmental Language Disorder, Autism, Low IQ*. Clinics in Developmental Medicine No. 139 (London: MacKeith), pp. 190–213.
- REILLY, S., TOMBLIN, B., LAW, J., MCKEAN, C., MENSAB, F., MORGAN, A., GOLDFELD, S., NICHOLSON, J. and WAKE, M., 2014, SLI: a convenient label for whom? *International Journal of Language and Communication Disorders*, **49**, 415–433.
- RICE, M. L., 2014, Advocating for SLI. Commentary on Bishop, D. V. M., Ten questions about terminology for children with unexplained language problems. *International Journal of Language and Communication Disorders*, **49**, 381–415. doi: 10.1111/1460-6984.12101
- RUTTER, M., 2014, Classification purposes and diagnostic concepts. Commentary on Reilly, S., Tomblin, B., Law, J., McKean, C., Mensah, F. K., Morgan, A., Goldfeld, S., Nicholson, J. M. and Wake, M., 2014, Specific language impairment: a convenient label for whom? *International Journal of Language and Communication Disorders*, **49**, 416–451. doi: 10.1111/1460-6984.12102
- SNOWLING, M. J., 2014, SLI—not just a semantic issue. Commentary on Reilly, S., Tomblin, B., Law, J., McKean, C., Mensah, F. K., Morgan, A., Goldfeld, S., Nicholson, J. M. and Wake, M., 2014, Specific language impairment: a convenient label for whom? *International Journal of Language and Communication Disorders*, **49**, 416–451. doi: 10.1111/1460-6984.12102
- STRUDWICK, M. and BAUER, A., 2014, Getting behind the label: practitioners' point of view. Commentary on Bishop, D. V. M., Ten questions about terminology for children with unexplained language problems. *International Journal of Language and Communication Disorders*, **49**, 381–415. doi: 10.1111/1460-6984.12101
- TAYLOR, C. L., 2014, The SLI construct is a critical link to the past and a bridge to the future. Commentary on Bishop, D. V. M., Ten questions about terminology for children with unexplained language problems. *International Journal of Language and Communication Disorders*, **49**, 381–415. doi: 10.1111/1460-6984.12101
- TOMBLIN, J. B., 2008, Validating diagnostic standards for SLI using adolescent outcomes. In C. F. Norbury, J. B. Tomblin and D. V. M. Bishop (eds), *Understanding Developmental Language Disorders* (Hove: Psychology Press), pp. 93–114.
- TOMBLIN, J. B. and NIPPOLD, M., 2014, Features of language impairment in the school years. In J. B. Tomblin and M. Nippold (eds), *Understanding Individual Differences in Language Development across the School Years* (New York, NY: Routledge), pp. 79–116.
- TOMBLIN, J. B. and ZHANG, X., 1999, Are children with SLI a unique group of language learners? In H. Tager-Flusberg (ed.), *Neurodevelopmental Disorders: Contributions to a New Framework from the Cognitive Neuroscience* (Cambridge, MA: MIT Press), pp. 361–382.
- WALSH, R., 2005, Meaning and purpose: a conceptual model for speech pathology terminology. *Advances in Speech-Language Pathology*, **7**(2), 65–76.
- WHITEHOUSE, A. J. O., 2014, Refining language impairment: researchers must pay their part too. Commentary on Reilly, S., Tomblin, B., Law, J., McKean, C., Mensah, F. K., Morgan, A., Goldfeld, S., Nicholson, J. M. and Wake, M., 2014, Specific language impairment: a convenient label for whom? *International Journal of Language and Communication Disorders*, **49**, 416–451. doi: 10.1111/1460-6984.12102
- WILLIAMS, D., BOTTING, N. and BOUCHER, J., 2008, Language in autism and specific language impairment: where are the links? *Psychological Bulletin*, **134**, 944–963.
- WRIGHT, E., 2014, Special Educational Needs provision in the real world. Commentary on Reilly, S., Tomblin, B., Law, J., McKean, C., Mensah, F. K., Morgan, A., Goldfeld, S., Nicholson, J. M. and Wake, M., 2014, Specific language impairment: a convenient label for whom? *International Journal of Language and Communication Disorders*, **49**, 416–451. doi: 10.1111/1460-6984.12102
- ZAMBRANA, I. M., PONS, F., EADIE, P. and EIVIND, Y., 2014, Trajectories of language delay from age 3 to 5: persistence, recovery and late onset. *International Journal of Language and Communication Disorders*, **49**, 304–316.