The public desires identification with a term labelling observed syndromes of behavior . . . "the fashionable" word appears to be —

Dyslexia?

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In recent months the public has had an opportunity to learn a new term, at least new to them. Likewise, educators have had an opportunity to have refreshed in their memory and usable vocabulary an old term. And, further, it would appear, a certain segment of the medical profession has discovered a term which would or might link themselves together with the public and the educator. Interestingly, the terms referred to here are one and the same, dyslexia. Without a doubt, this appears to be the current "fashionable" word to use, and one is hearing it and seeing it referred to more and more.

The public most concerned with this term are those parents of youngsters having reading problems. The educators most concerned with dyslexia are those who have either been confronted with children having reading difficulties or teachers dealing with retarded readers as remedial reading specialists. The physicians most concerned with and utilizing the term, dyslexia, are those non-optometric refractionists who have been faced with the fact that optometry has made and is making tremendous contributions to those individuals who have had reading problems, many of whom have not responded to standard educational or remedial reading instruction.

The term, dyslexia, has significant and severe conotations and implications. People respond to a label. People enjoy the act of categorizing. The drive is to pin down and identify a specific causative agent, such as in disease, with hopes that by identifying etiology, a remediation is therefore known or discovered, even if the remediation is "do nothing". There is no doubt that such an approach may be desirable as long as it is based on specific fact. However, such an approach is extremely dangerous and extremely unfair, if, as has been the case in numerous examples, an originally stated assumption, without substantial fact, is provided with assumed substantiation rather than fact. Unfortunately, in time, it is rather easy to accept such an assumption as though it were fact, even to the extent of ignoring or even denying opposing substantiated data which actually may contradict the initial assumptions. This appears to be the case with "dyslexia" at present. The label has been introduced (actually revived — not by those who coined it initially but by another group.) The label has been readily acceptable because of the innate desire to label . However, the rapid acceptance of the label is leading toward an even more important aspect as affects optometry. The public as well as educators are now looking for solutions to this problem, not just the label, now that they have a label. This is particularly true since those who have done the re-introducing of the term have not presented with it a desired and acceptable solution. In fact, the apparent medical approach, by virtue of the implied etiology, will tend to deny anyone else the privilege of doing anything.

Medicine would have us believe that "dyslexia" is a disease. It is certainly true that the term itself sounds like a disease.

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It has been claimed but without any form of evidence that dyslexia is a neurological lesion. This is an example of an assumption existing for so long, it took on the characteristics of fact. "The Disabled Reader," edited by Money, defines dyslexia as "imperfectly developed reading skills, or the deterioration of skill without its total absence, as a result of a brain lesion or dysfunction." Yet, on the other hand, Stedman's Medical Dictionary[3] defines it as "incomplete alexia, inability to read more than a few lines with understanding." The word itself, actually a coined word, means "bad" (dys-) "word" (-lexia).

Historically, the term, itself, was first used and introduced by Wallin when he attempted to operationally differentiate between mild cases of reading disability which he called dyslexia and severe cases referred to as "visual sphasia," which at that time were *assumed* to be "congential" problems, and earlier referred to as simply "congenital word blindness," again an assumption. Hinshelwood, in 1917, was the first to use this phrase as he made the assumption of an innate nature of reading disability, assuming it to be a localized defect in the cortex. His only evidence, interestingly enough, for this assumption was that those cases falling into this category demonstrated extreme resistance to any remediation. M.D. Vernon noted that "unfortunately the diagnosis of 'congential word blindness' became popular among medical practitioners, though it has been repudiated again and again by psychologists; and many unhappy children have been diagnosed as cases of 'congenital word blindness', and all hopes of teaching them to read has been abandoned[4]." S. Kirk[5] notes in his book, "Teaching Reading to Slow Learning Children" the significance of avoiding such terms as dyslexia. He points out that unfortunately these kind of terms (i.e. word blindness, alexia, dyslexia, strephosymbolia, etc) imply some etiology or reason for the disability which is why "many psychologists prefer to use the term 'reading disability' or 'reading defect'" which doesn't imply etiology, the main reason being that when etiology is implied, the doors are closed for additional approaches to the problem just as Vernon stated above.

Generally speaking, the coining of a term follows a series of observations on the part of an investigator. The term is coined as a form of shorthand to imply an observed syndrome or group of observations peculiar to some phase of behavior. Frequently, due to the investigators particular bias, embedded within this coined term is an implied etiology and implied remediation approach. This is the unfortunate but accepted aspect of coined terms based upon syndromal observation. Thus, as a warning, in science and particularly the application of science, we must be extremely careful in differentiating fact from assumptions, as well as assumptions based upon our own biases, although it is our privilege to bias our assumptions, but let not fact and assumption become confused.

A search of the literature will reveal numerous coined terms to describe various groupings of observations of those afflicted with reading disability and certainly numerous remedial as well as initial educational approaches. Generally speaking, the most significant labels have been applied to those syndromes in whom it has been noted that they didn't respond to standard educational or remedial measures. Obviously, the educator is always looking for answers for those children that do not respond to learning processes in the usual manner. The educator is seeking help. Fortunately, there are many related disciplines and professions that are striving to give help. Before the current "excitement" of dyslexia, the public and education were made aware of Delacato's[6, 7, 8] neurological organization approach (the creeping-crawling school of thought) in which a re-introduction of the problems (so-called) of "mixed dominance" again gained temporary prominence. In earlier years this particular syndrome was referred to as strephosymbolia. Again, these were convenient coined labels to identify a syndrome which implied itiological connotation and remediation. There has

been much in the way of significant research and development of numerous approaches, generally revolving about different methods of approaching learning and particularly the learning to read. Yet, reading problems remain. Whether the incidence of reading problems has increased or not, it is difficult to know. But, surely, within the last generation, the awareness, significance, and identification of reading problems have increased, and certainly the contributions of optometry in this area can't be ignored. Although it is not the purpose of this paper to review the optometric contributions, it is strongly suspected that the current interest in and revival of the term dyslexia has arisen as a result of the significant optometric contributions to education. Vision and the visual process cannot be ignored in any concept or approach to learning. This is the fundamental physiological process upon which learning is built.

However, recognizing what we do know today in optometry from the standpoint of a dynamic functional approach to vision, we are well aware of the importance of vision to learning in the human being. We are aware of the importance of vision to the functioning human being. We are aware of the developmental processes of vision in relationship to the totality of the human being. Gesell stated that "Vision is the dominant process in the development and functioning of the human being." We are aware that the development of the visual process can be thwarted, resulting in significant visual-motor problems which interfere with the learning process. We are aware of the significance of persistent stress on the visual system creating visual problems which reveal or may reveal numerous interferences in visual process, many of which are directly related to the learning process. We are extremely aware of the optometric approaches to these visual problems and the fact that visual training is frequently the only significant approach to the remediation of these visual problems, particularly as related to these learning problems. We are aware that with the optometric approaches of visual training and application of lenses, a more sound physiological foundation of the visual process is established which will permit the learning human being to continue to learn free of physiological impairment. We are aware of the importance of the use of lenses to prevent the development of visual problems.

However, are we aware of the fact that the coining of terms such as dyslexia originated as a result of observing a syndrome peculiar to those children who had difficulty learning to read but that these terms were coined by those having no knowledge of the significance of vision as a process? In fact, most of this work and observation was done and made before optometry had begun to organize its current thinking. Although it is recognized that there can be *many* causes and factors involved in learning disabilities, it stands to reason that vision and the visual process must be kept uppermost in mind as one of the most significant physiological aspects of learning, since it is via the visual process that most learning takes place. Over the years, in optometric practice, we have been confronted with visual problems of people wherein no small percentage have indicated the existance of learning problems, and particularly those diagnosed as having reading disability. When the optometric examination has revealed the existance of a visual problem, the visual problem was alleviated (most often by means of visual training) with the associated benefits of increased freedom to learn and/or increased freedom to read. It is not the optometric responsibility to teach reading, but it is an optometric responsibility to do anything within its professional scope to alleviate a visual problem and restore a more sound physiological foundation upon which learning can be built. This is the optometric contribution.

It is extremely interesting to review the literature, both past and present, regarding reading disability, and particularly the newer current material on the old term and topic of dyslexia. The descriptions of

the cases involved should be read as an optometrist. It will become immediately obvious to the optometrist that the descriptions of the dyslexic are identical to or similar to those patients whom the optometrist labels a visual problem. Medicine has served to re-introduce the term dyslexia to education and the public as an answer to the reason for many reading problems then states that it is caused by a neurological lesion (an assumption) and finally provides no remediation approach or suggestion. Duke-Elder[11], discussing dyslexia states that, ". . . the cause of the disability is unknown." Regarding treatment, he says, "treatment is always difficult, but should be patiently pursued by recognized educational methods." Yet, education has been striving to approach these problems through various developed modifications of educational method but have been stymied due to lack of response from a purely educational approach. Education has been seeking help from outside its own field, perhaps recognizing that there must be physiological answers. Medicine's answer is no answer. Education will not sit back and just allow nothing to be done. Neither will or does the public. The public has been recognizing, as has education, optometry's contribution, and are seeking more and more help, demanding more of optometry. In a sense, the optometric contribution has been but a spark in relation to needs and demands. But the medical contribution of re-introducing the term dyslexia has served to actually kindle the optometric spark and is now creating a flame of demand on the part of the public and education is looking to optometry to provide more and more of the benefits to children with learning disabilities by means of established optometric programs of remediation. From the standpoint of an optometrist, the term of dyslexia is an educational term that describes a syndrome which the optometrist will view as a visual problem. In this view point, the optometrist does deal with dyslexic problems but doesn't treat dyslexia. The optometrist deals with the visual problem.

As a final note, it must be recognized and appreciated that the public desires identification with a term to label observed syndromes of behavior. Although it has been noted that such terms may be misused, they may serve some positive functions. It may well be appropriate that optometry give consideration to the coining of terms just as others have done that specifically and succinctly identify and imply particular syndromes. Dr. Daniel Woolf has suggested the use of one such label – dyschriesopia – which means, literally, vision which is awkward and clumsy to use, but to state it more appropriately means "difficulty in learning because of a visual problem." **AOA**

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