Adult Dyslexia and Word Puzzles:
Results of a Pilot Project

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ABSTRACT

This article describes how dyslexia is a real disease that is linked to specific semiotic systems, such as the alphabet and word orthographical rules. As such, it is likely to be a result of an asymmetry between developmental cognition and particular semiotic structure. If this is so, then an appropriate intervention approach that is based on this hypothesis might involve the use of word puzzles that play on the alphabetic and semantic structure of words. This article presents the findings of a pilot project in which selected adult dyslexics were asked to participate in a word puzzle study, consisting of word searches, anagrams, and word squares, whereby they would be asked to solve a set of puzzles under the supervision of a researcher. The latter documented and annotated the actual behaviors of the participants as they solved the puzzles. The overall result of the project is a promising one in that it suggests that the use of such “enigmatological” strategies may have a definite role to play in dyslexia intervention, although much more research is needed in this area.

KEYWORDS
Alphabet Principle, Anagrams, Dyslexia, Enigmatology, Word Searches, Word Squares

INTRODUCTION

The term dyslexia was first used in 1887 by Rudolf Berlin, a German ophthalmologist, to describe a specific type of word-blindness found in adults, which he ascribed to brain lesions (Elliott and Grigorenko 2014, p. 2). As Habib and Giraud (2013: 229) point out, today, it is defined as “a specific and persistent learning disability affecting the acquisition and development of the written language code (reading and spelling) and causing significant handicap to academic achievement and/or activities of daily life.” The disability occurs in alphabet-using cultures and relates to the structural features of alphabets and the writing of words in such cultures. It thus can be said to constitute a semiotic problem.

After Berlin’s observations, dyslexia was initially lumped together with many other disorders. Only around the mid-1890s did it become recognized as a more serious issue, as relevant studies began to emerge. It was at first called, colloquially, “congenital word blindness.” Since the middle part of the twentieth century, a plethora of studies has emerged.
to characterize dyslexia scientifically. Virtually all the studies implicate the left-hemisphere of the brain, where language is located. The salient aspect of the dyslexic individual concerns, in fact, problems in writing and reading, including confusion over letters, numbers, words, and especially the sequence of alphabet characters that represent phonetic sounds as they are represented in words and other structures. All other symptoms are intertwined with this general one. If this is indeed the case then it might be possible to intervene therapeutically by involving the dyslexic in word puzzles that involve the letter-to-sound principle of alphabet use, and which will be called henceforward, the Alphabet Principle (AP). Puzzles such as word searches, anagrams, and word squares, which all involve an interplay between alphabetic representation and word semantics in a ludic or game-playing framework, might lend themselves as “correction mechanisms” in dyslexia since they might be ideally suited for connecting form and meaning through playfulness.

This paper reports on a pilot project, consisting of three interventions on adult dyslexic individuals, utilizing word puzzles, in order to assay if they constitute potential corrective mechanisms. A fourth individual was involved afterward as a control participant. In other words, we selected those who had been diagnosed with dyslexia in childhood. Our hypothesis is that word puzzles might stimulate areas of the brain where representation is processed and thus that they may be effective in bringing about a spontaneous correction of dyslexic symptoms. This can be called the Enigmatological Hypothesis (EH). The results of the study indicate that the EH might be a promising avenue to pursue with more controlled experiments, given that the present study is informal and observational. Overall, the findings indicate that dyslexia can be approached with puzzle therapy (so to speak).

BACKGROUND

The type of dyslexia that concerns us here is known generally as phonological dyslexia. Its main symptomatology includes difficulties in breaking words down into syllables and into smaller sound units or phonemes. For example, if one says a word out loud to a child with weak phonemic skills, the child can hear and repeat the word correctly but will have trouble segmenting it into the different sounds that constitute it. The child will typically have problems matching phonemes with their written symbols (graphemes). Diagnoses have shown that such children, when shown a bunch of letters in a row, can usually name each of them, albeit with difficulty—but cannot put them together phonemically (in most cases). Some believe that slow naming speed is behind difficulties with phonological processing in reading.

Some dyslexic children struggle with reading because they cannot recognize words by sight, and especially those whose spelling does not match the actual value of the phonemes. So, words like weight and debt cannot be sounded out in a letter-to-phoneme way; they need to be memorized. Another area of struggle is in reading fluency. To be able to read quickly and accurately, children need to recognize many common words at a glance—without sounding them out. But most children with dyslexia have problems sounding out words and this makes it hard for them to build a “sight-word” vocabulary. This is sometimes referred to as surface dyslexia. Of particular concern to the present study is what some call spatial or directional dyslexia, which refers to trouble telling left from right or other modes of directionality in writing words phonemically (Annett, Eglinton, & Smythe 1996). While dyslexia is a generic term, dysgraphia refers to the inability to write coherently, as a symptom of brain disease or damage. In most types of dyslexia, dysgraphia is essentially a representational counterpart, given that the general consensus is that dyslexics are both “expected to have weak phonological processing because the cerebral representation of speech is insecure,” and have “weak representation of words in visual memory” (Annett Eglinton, & Smythe 1996: 167).
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