

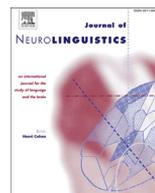


ELSEVIER

Contents lists available at SciVerse ScienceDirect

Journal of Neurolinguistics

journal homepage: www.elsevier.com/locate/jneuroling



Eye movement in isolated spelling disorder – An analysis using the dual route model of visual word recognition



Piotr J. Francuz^a, Aneta R. Borkowska^{b,*}

^aLaboratory of Experimental Psychology, Faculty of Social Sciences, The John Paul II Catholic University of Lublin, Al. Racławickie 14, 20-950 Lublin, Poland

^bDepartment of Clinical Psychology and Neuropsychology, Faculty of Pedagogy and Psychology, Maria Curie-Skłodowska University in Lublin, Pl. Litewski 5, 20-080 Lublin, Poland

ARTICLE INFO

Article history:

Received 28 April 2013

Received in revised form 6 June 2013

Accepted 6 June 2013

Keywords:

Spelling disorder

Eye movement

Dual route model

Orthographic representation

Mental lexicon

ABSTRACT

The aim of the study is to investigate whether adolescents with isolated spelling disorder face difficulties connected with the functional effectiveness of words' orthographic representations in the mental lexicon, and to determine the nature of such dysfunction. The assumed effectiveness indicator for the function of orthographic representations was the characteristics of eye movements performed in course of assessing the correctness of spelling of words.

The main group effect was not found in the eye movement indices. The different patterns of eye movement between poor and good spellers were found in the context of the recognition accuracy and correctness of notation. This indicates that spelling disorder is not a problem of perception and visual attention, nor is it a problem of phonology (proper function of sub-lexical and lexical route). We suggest it could be a symptom of difficulties in coding and perceptual categorization.

© 2013 Elsevier Ltd. All rights reserved.

1. Introduction

Even though difficulties in written language processing take the form of reading and writing impairments, research aimed at describing neurocognitive mechanisms of these impairments focus

* Corresponding author. Mobile: +48 605223538.

E-mail address: aneta.borkowska@autograf.pl (A.R. Borkowska).