



**Noelle Castro Ferreira**

**Syntactic impairment and reading abilities:  
Possible relations**

**Dissertação de Mestrado**

Thesis presented to the Graduate Program in  
Language Studies, PUC-Rio, in partial fulfillment  
of the requirements for the degree of Master of  
Arts/Linguagem Studies.

Advisor: Profa. Letícia Maria Sicuro Corrêa

Rio de Janeiro  
May 2017



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**Profa. Letícia Maria Sicuro Corrêa**

AAdvisor

Departamento de Letras – PUC-Rio

**Profa. Tatiana Bagetti**

UFF

**Profa. Inge Anema**

SUNY New Paltz

**Profa. Monah Winograd**

Coordenadora Setorial do Centro de Teologia  
e Ciências Humanas – PUC-Rio

Rio de Janeiro, 5th May 2017

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## Noelle Castro Ferreira Roboredo

Bachelor in Letters (Portuguese-English) at State University of Rio de Janeiro in 2010. Schoolteacher of English in public schools of Rio the Janeiro. Graduate student in the Master's degree Program in Language Studies of the Pontifical Catholic University of Rio de Janeiro presenting this dissertation as final course requirement.

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## Abstract

Roboredo, Noelle Castro Ferreira; Corrêa, Letícia Maria Sicuro (Advisor). **Syntactic impairment and reading abilities: possible relations**. Rio de Janeiro, 2016. 140 p. Dissertação de Mestrado – Departamento de Letras, Pontifícia Universidade Católica do Rio de Janeiro.

This dissertation intends to verify whether syntactic impairment, as detected in the oral comprehension of costly structures -- object WH+N questions (OWH+N) and object relative clauses (ORCs) --, predicts difficulties in reading fluency and comprehension. The syntactic abilities of 6<sup>th</sup> graders from three public schools in Rio de Janeiro were evaluated, giving rise to syntactically impaired (SI) and control (CT) groups. Those who satisfied criteria at the word level in word-recognition/reading tasks proceeded. Two experiments assessed reading fluency (rate, accuracy, prosody) and the comprehension of each of the target structures in isolation (picture-identification task) and in discourse (self-paced reading task). In the latter, the intervening subject was manipulated for structural complexity (full nominal phrase and pronoun). One aspect of prosody (*pitch contour*) distinguished the groups, with lower scores in the SI group in both tasks. An aspect of accuracy (*number of disfluencies*) distinguished them in the discourse task (more disfluencies in the SI group). The comprehension of the target-sentences in isolation was harder for the SI group. Lexical/discourse factors can create differential demands for sentences in discourse, minimizing group effects. The effect of intervention was in the predicted direction for OWH+N sentences (more demands for full nominal phase subjects). As for RC, this effect was not significant, possibly due to difficulties in the ascription of illocutionary force to YES/NO questions. In an overall analysis of reading fluency in discourse (different structures/punctuation marks), the pitch contour indicates syntactic impairment. Impairment at the syntax-prosody interface can account for these results.

## Keywords

Reading fluency; syntactic impairment; SLI; prosody; intervention hypothesis.

## Resumo

Roboredo, Noelle Castro Ferreira; Corrêa, Letícia Maria Sicuro (Orientadora). **Possíveis relações entre distúrbios da linguagem no domínio da sintaxe e habilidades de leitura.** Rio de Janeiro, 2016. 140 p. Dissertação de Mestrado – Departamento de Letras, Pontifícia Universidade Católica do Rio de Janeiro.

Essa dissertação investiga uma possível relação entre comprometimentos no domínio sintático e dificuldades de leitura. Mais especificamente, busca-se verificar se dificuldades na compreensão oral de estruturas altamente custosas – interrogativas QU+N de objeto (OWH+N) e relativas de objeto (ORCs) – preveem problemas na compreensão leitora, quando tais estruturas estão envolvidas. 78 alunos (idade média: 12) do 6º ano de três escolas públicas do Rio de Janeiro participaram desse estudo. Suas habilidades sintáticas foram inicialmente testadas. Dois grupos foram criados para participarem dos testes de leitura: com possível comprometimento sintático (SI) (n= 25) e controle (CT) (n=53). Um teste de reconhecimento de palavras e outro de leitura de palavras/pseudopalavras isoladas foram elaborados e realizados, uma vez que a fluência em leitura requer que dificuldades nessas habilidades sejam superadas. Novos grupos (SI e CT), sem problemas nesse nível, foram definidos (com 12 participantes cada). Dois experimentos foram conduzidos, buscando testar suas habilidades de fluência (velocidade, precisão e prosódia) em leitura com OWH+N e ORCs em sentenças isoladas (tarefa de identificação de imagens) e no discurso (tarefa de leitura automonitorada). No último caso, o sujeito interveniente foi manipulado quanto à complexidade estrutural (DP completo ou pronome). Um aspecto da prosódia (uso adequado de *pitch*) distinguiu os grupos, com menor desempenho no grupo SI em ambas as tarefas. Um aspecto da precisão (número de disfluências) também os distinguiu quando as sentenças investigadas foram apresentadas no discurso (mais disfluências no grupo SI). A compreensão foi particularmente afetada quando as sentenças foram lidas isoladamente. Fatores relacionados à escolha lexical, bem como fatores discursivos podem criar demandas diferenciadas para as sentenças no discurso e isso pode ter minimizado efeitos de grupo. O efeito de intervenção foi obtido na direção prevista nas interrogativas QU+N (OWH+N), em que uma demanda maior foi observada nas condições de DP completos. Já no caso das

relativas de objeto (ORC), um efeito significativo não foi obtido, possivelmente devido a dificuldades na atribuição de força ilocucionária interrogativa às perguntas SIM /NÃO. Uma amostra de sentenças com diferentes estruturas e com pontuação variada foi examinada, a fim de se obter uma análise geral de fluência em leitura. Novamente o *pitch* é indicativo de comprometimento sintático. Comprometimentos na interface sintaxe-prosódia podem explicar esses resultados.

## **Palavras-chave**

Fluência em leitura; comprometimento sintático; DEL; prosódia; hipótese da intervenção.

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