



# **An ERP Examination of a Pragmatic Repeated Name Penalty** Tali Ditman<sup>1,2</sup>, Mante Nieuwland<sup>1</sup>, & Gina R. Kuperberg<sup>1,2</sup> <sup>1</sup>Massachusetts General Hospital, Charlestown, MA,<sup>2</sup> Tufts University, Medford, MA

### Introduction

The lexical repetition effect is robust, with facilitation observed to repeated words in isolation and in discourse. Recent studies have provided behavioral and electrophysiological evidence that syntactic (Almor, 1999; Gordon et al, 1995; Swaab et al, 2004) and semantic factors (temporal shifts in narratives; Ditman et al, 2008) can modulate this effect. Repeating the name of a person or entity that is already in a reader's focus of attention results in a processing cost relative to repeating a non-prominent name or entity. This finding is known as the repeated name penalty (or the semantic repeated name penalty when modulated by semantic factors).

The present study used event-related potentials (ERPs) to investigate whether pragmatic cues could modulate the facilitation effects of lexical repetition in discourse.

### Method



difficulty integrating the meaning

Back

of a word into its preceding context.

The P600 is a positive deflection in the waveform, beginning approximately 500msec after word onset. Larger positivegoing amplitudes indicate reanalysis.

Same person/Same entity:	Same person/D
Lisa and Mark exercised often.	Lisa and Mark e
Lisa ran on the treadmill.	Lisa ran on th
She also ran on the treadmill.	She also ran o
They also had a healthy diet.	They also had a
<u>Different person/Same entity:</u>	Different pers
Lisa and Mark exercised often.	enti
Lisa ran on the treadmill.	Lisa and Mark e
<b>Mark also ran on the treadmill.</b>	Lisa ran on th
They also had a healthy diet.	Mark also ran

Sixteen Tufts University students read 4-sentence scenarios.

Different entity:

exercised often. he treadmill. on the track. a healthy diet.

### son/Different ty:

exercised often. he treadmill. on the track. They also had a healthy diet.

## Procedure

Sentence 1 introduced two characters; sentence 2 linked one of these characters to a specific entity ('Lisa ran on the treadmill'); sentence 3 either referred to this character or to a different character ('She' or 'Mark'), followed by the word 'also', and then either the same entity ('ran on the treadmill') or a new entity ('ran on the track').



128 experimental stimuli (32 per condition) 80 fillers without "also" Task: Comprehension questions on approximately 45% of the trials.



They also had a healthy diet.



TD was supported by a NARSAD and GRK was supported by NIMH (R01 MH071635), NARSAD (with the Sidney Baer Trust) and a Claflin Distinguished Scholars Award.

### Acknowledgements