

Testing the response suppression mechanism of working memory

Benjamin Kowialiewski^{1,2,3}, Klaus Oberauer³

¹University of Liège, Belgium

²Fund for Scientific Research F.R.S.-FNRS, Brussels, Belgium

³Department of Psychology, University of Zürich, Switzerland



**University of
Zurich**^{UZH}



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Introduction

Immediate serial recall

Encoding

dog

arm

nuke

blend

tree

mug

Recall

Score

Introduction

Immediate serial recall

Encoding

dog arm nuke blend tree mug

Recall

dog / blend nuke bee mug

Score

Introduction

Immediate serial recall

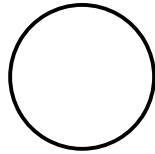
Encoding	dog	arm	nuke	blend	tree	mug
Recall	dog	/	blend	nuke	bee	mug
Score	1	0	0	0	0	1

Introduction

How do we encode and recall information?

Introduction

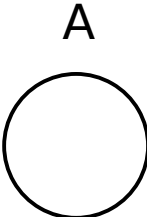
Items



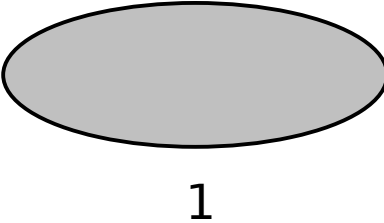
A

Introduction

Items

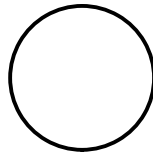


Positions



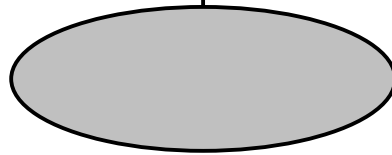
Introduction

Items



A

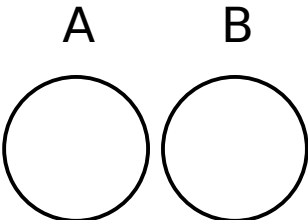
Positions



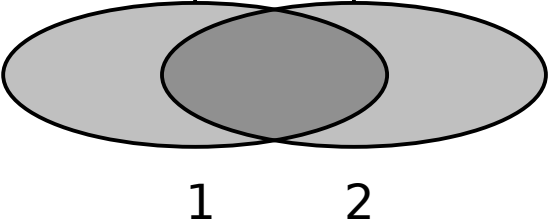
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Introduction

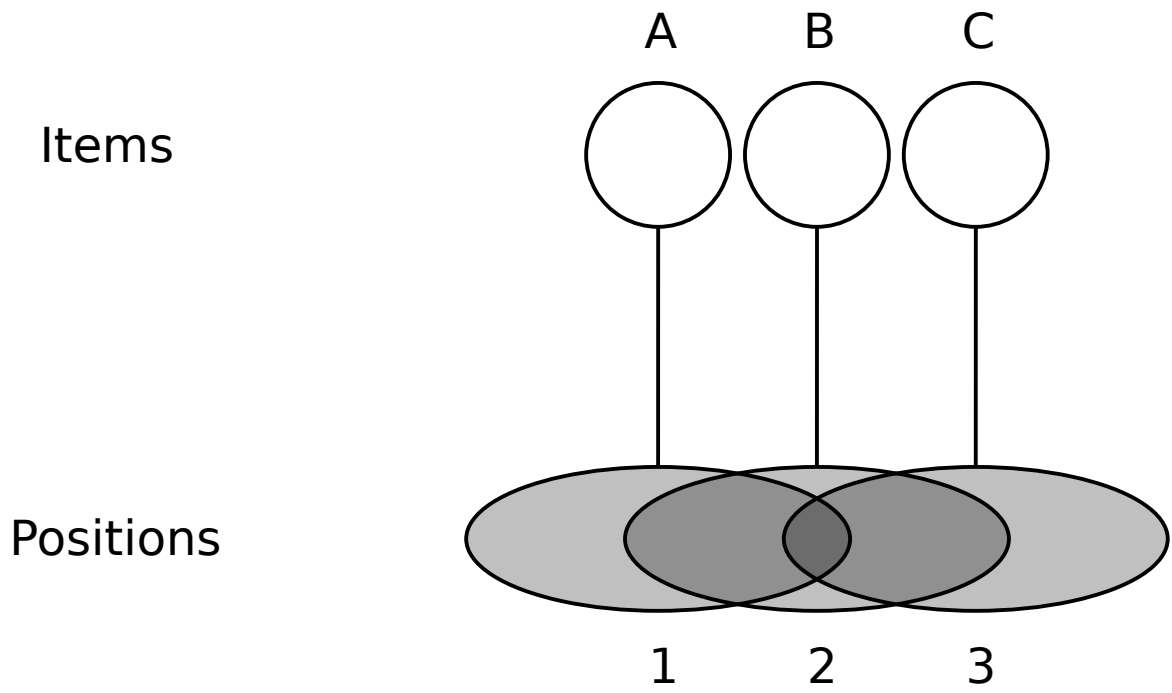
Items



Positions

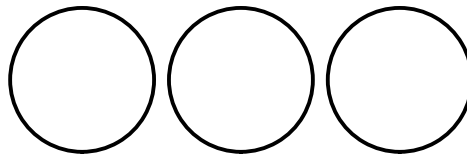


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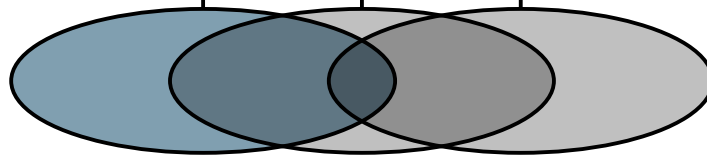


Introduction

Items



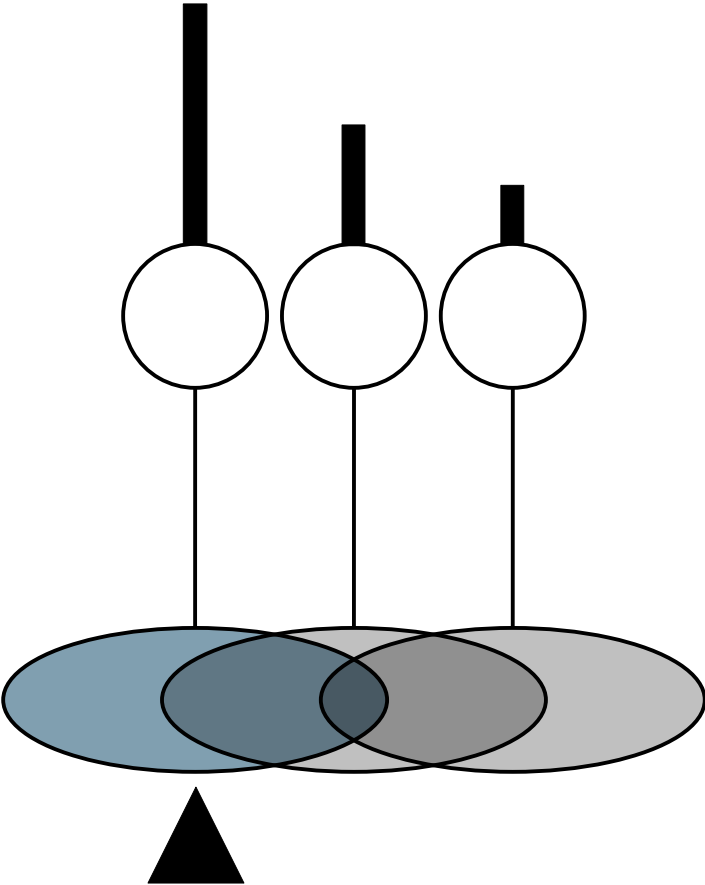
Positions



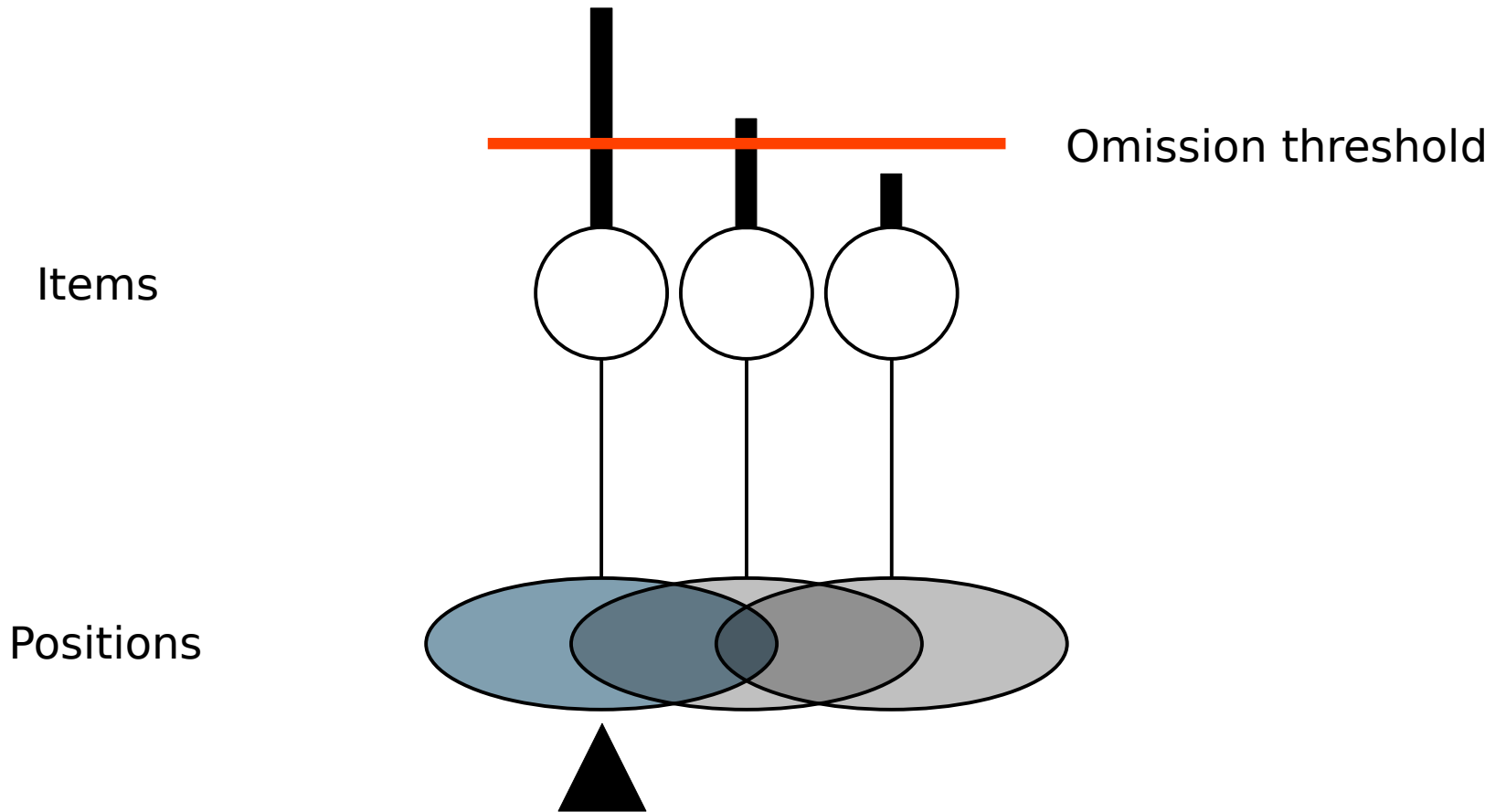
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Items

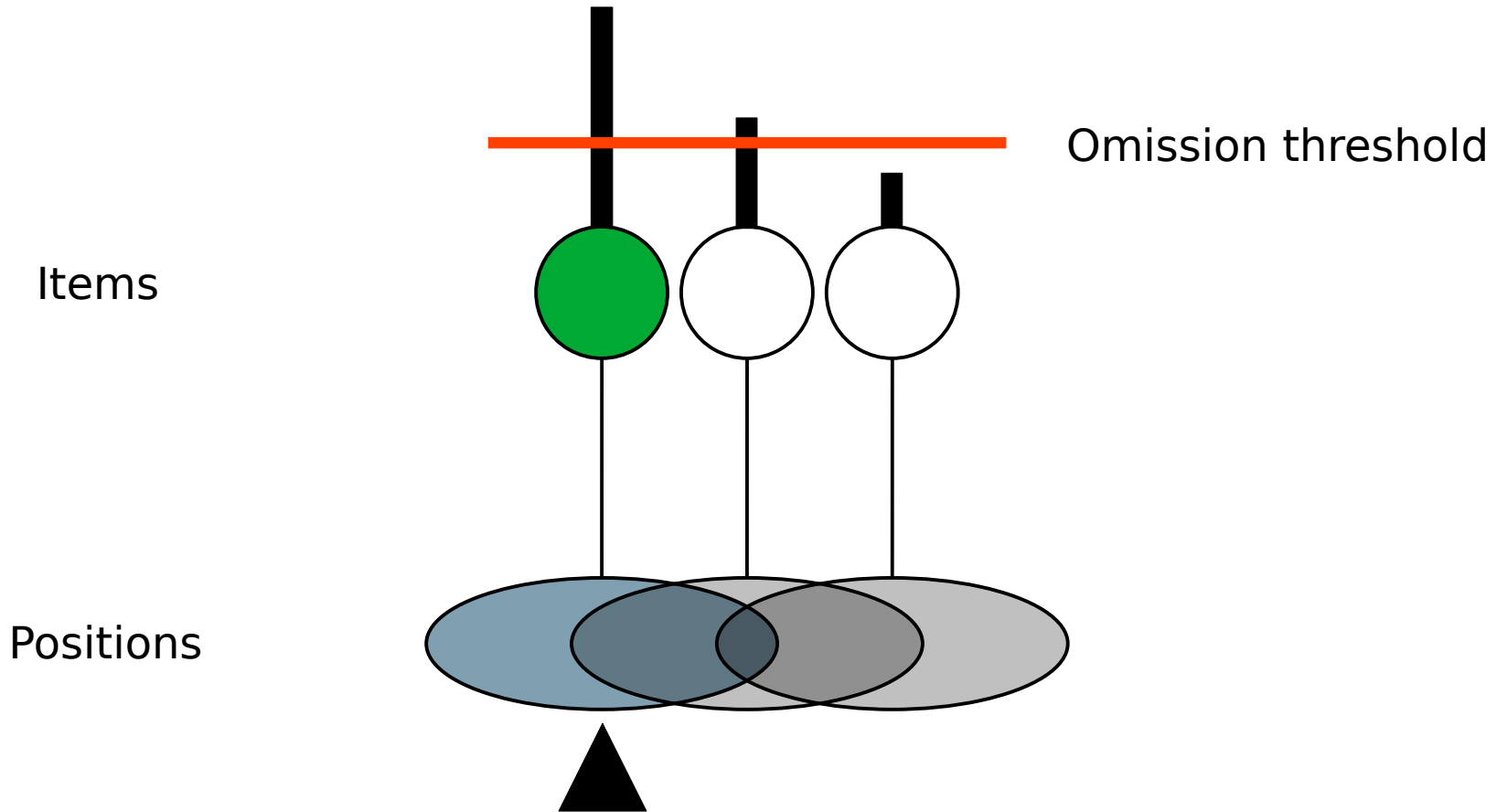
Positions



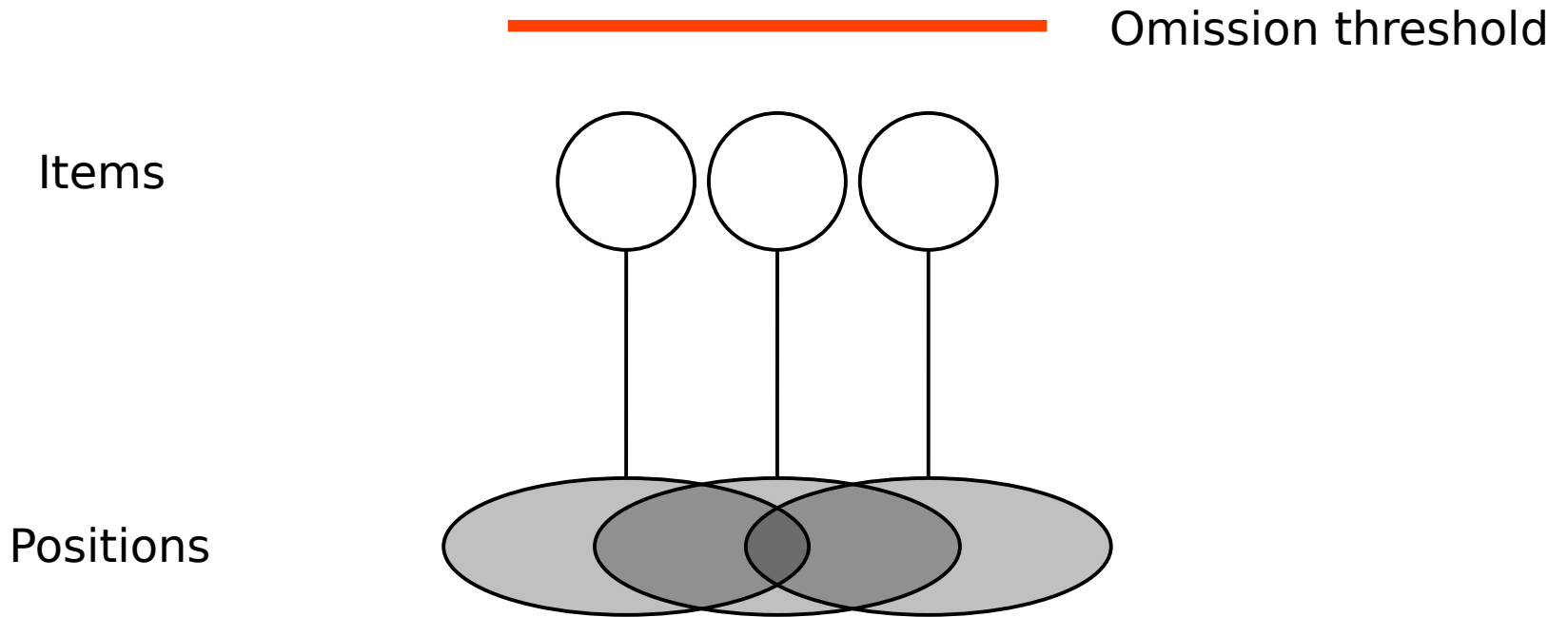
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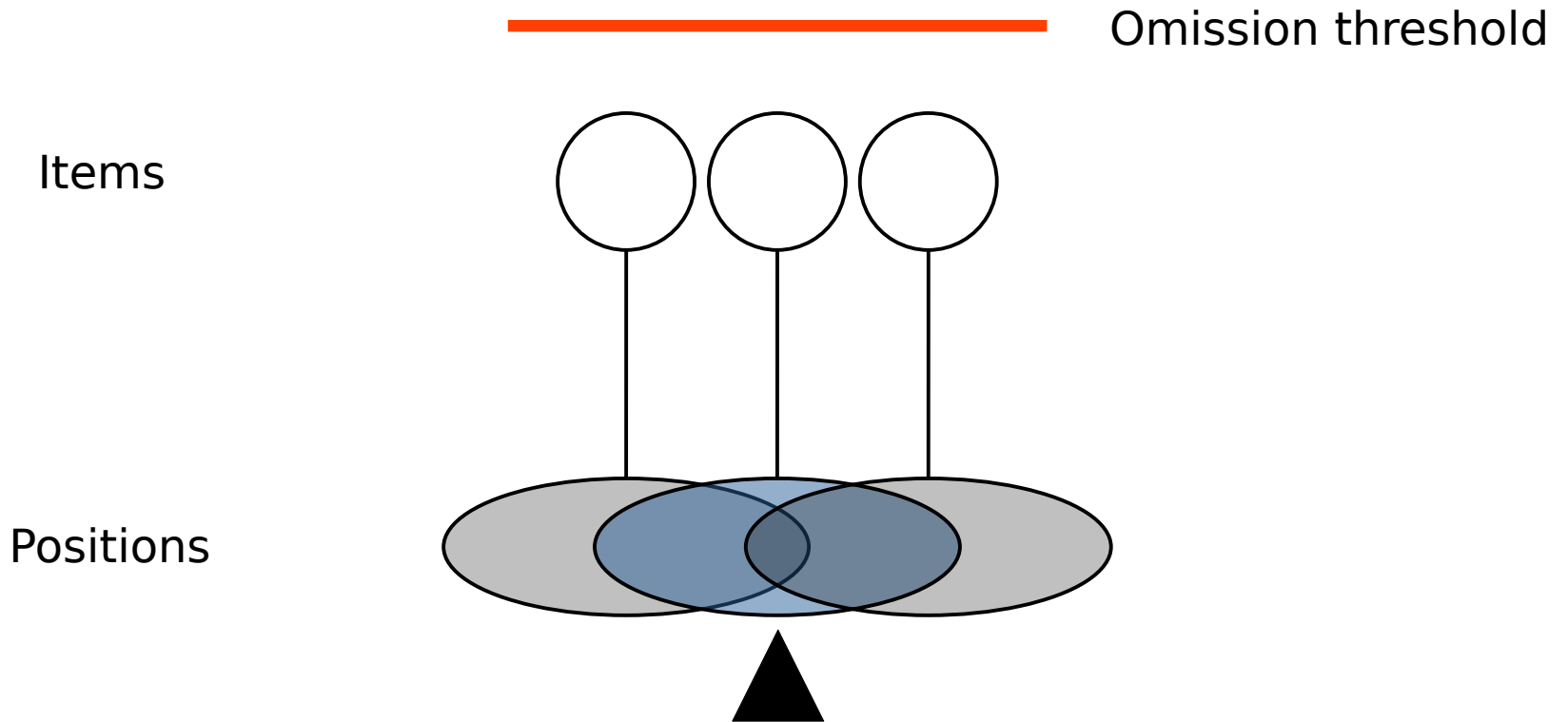
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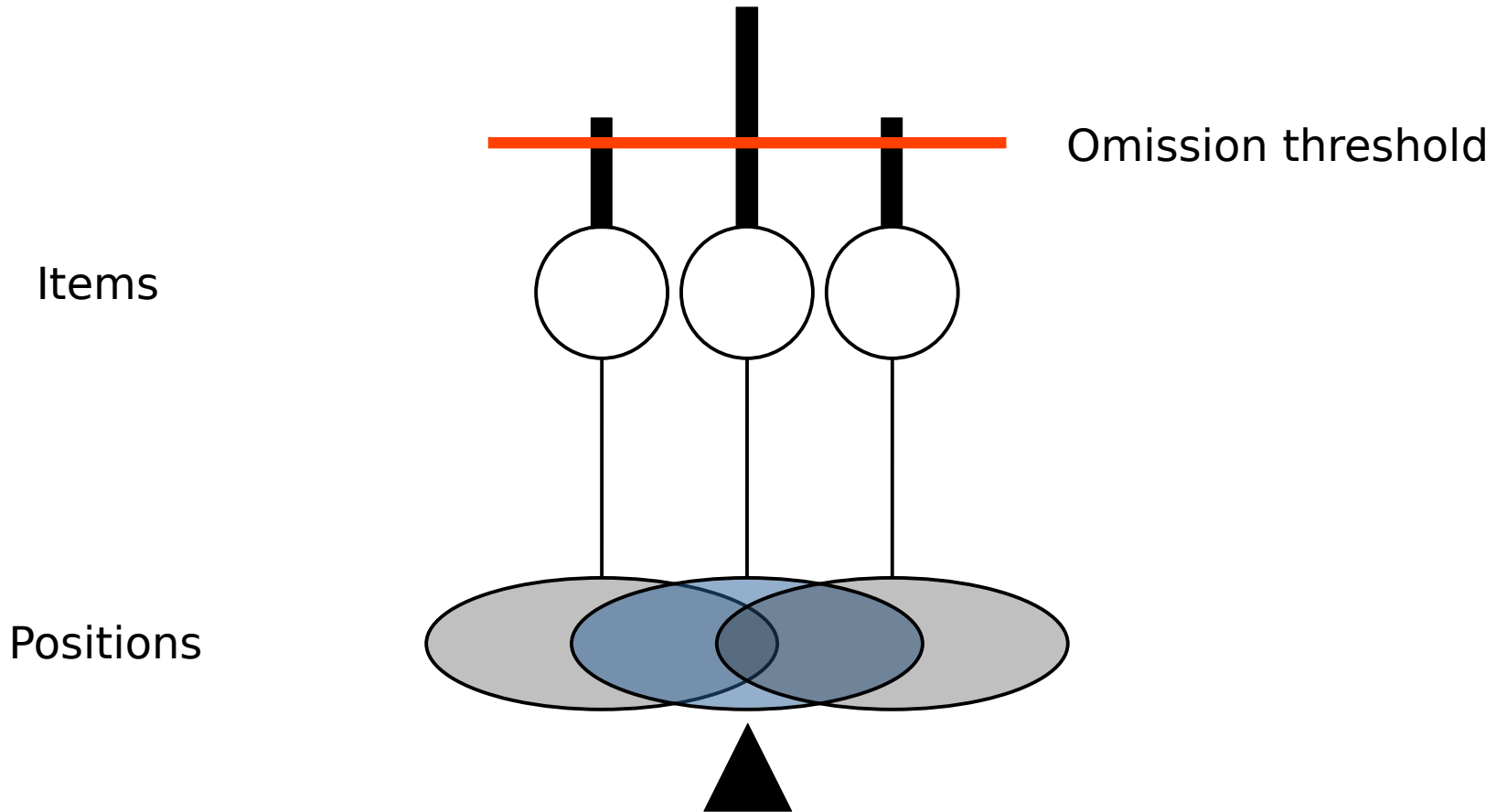
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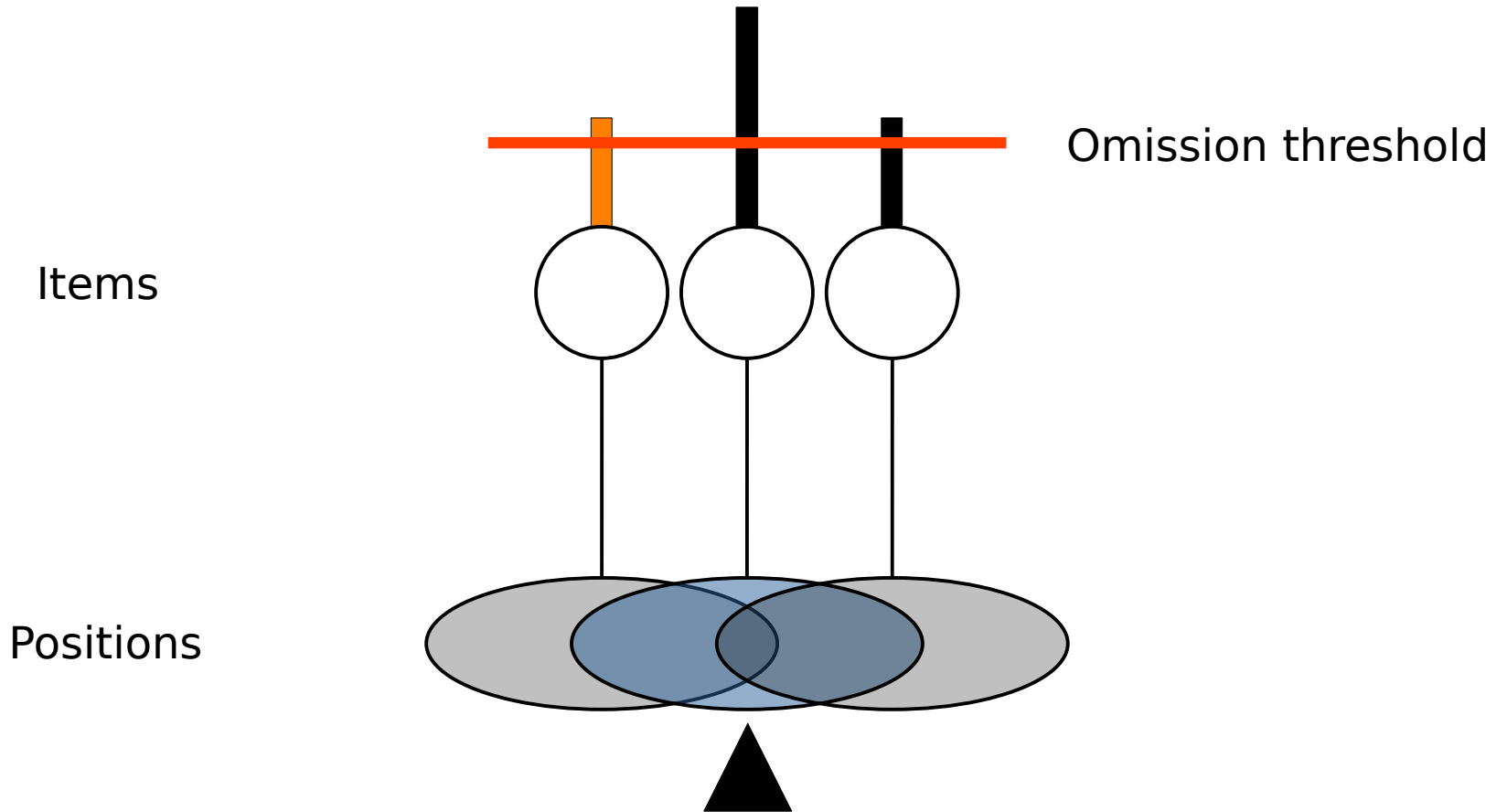
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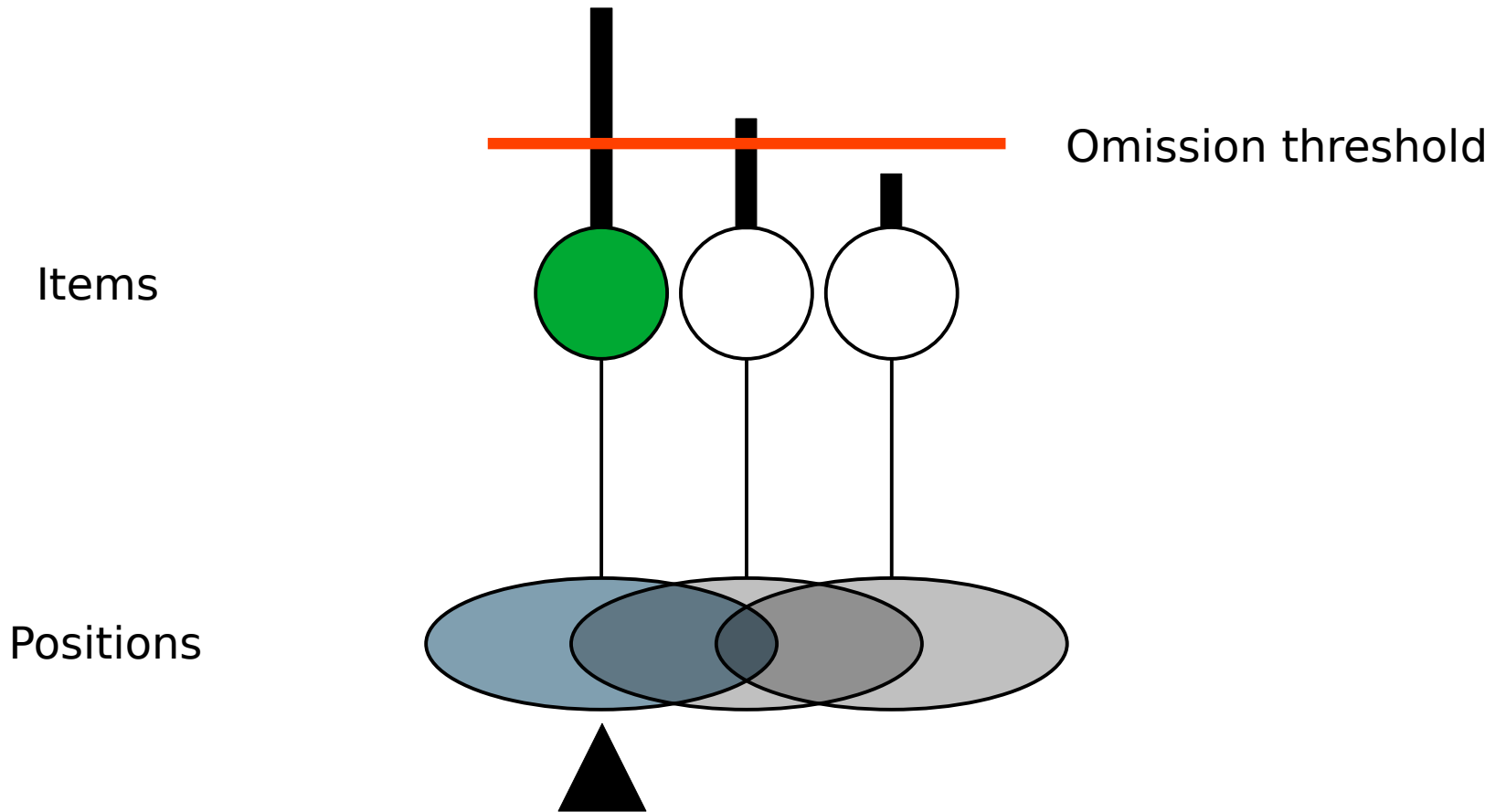
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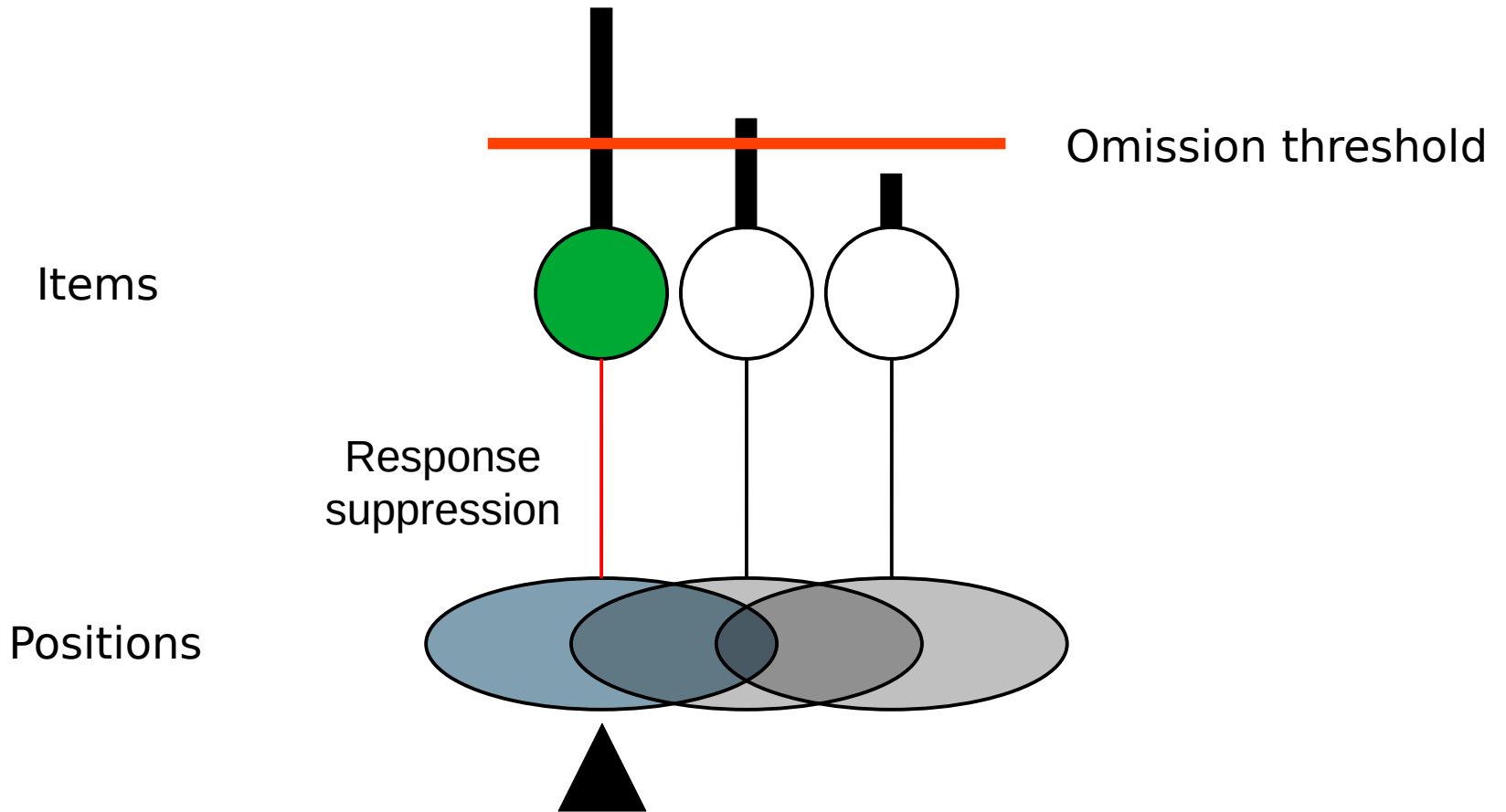
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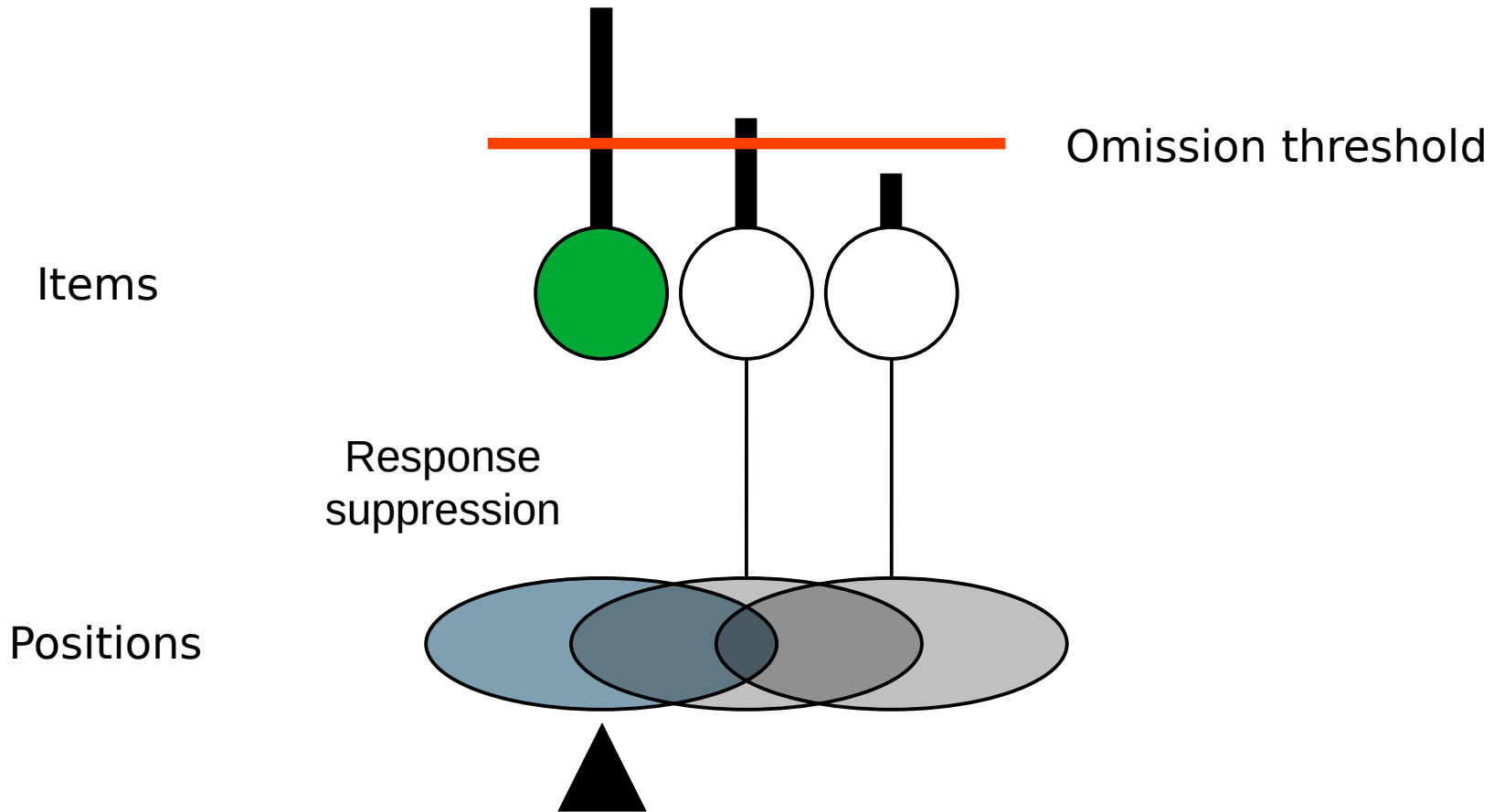
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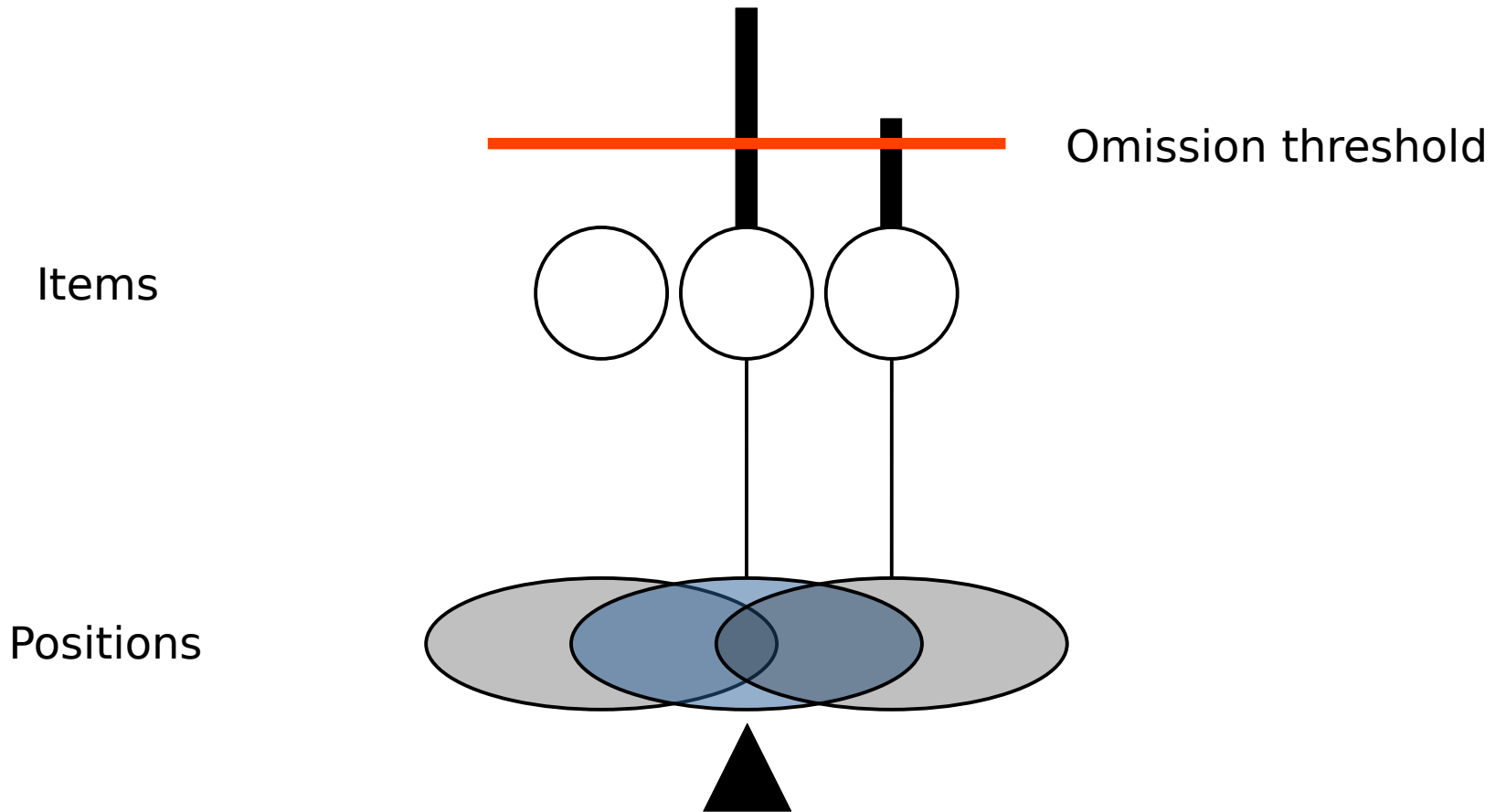
Introduction



Introduction



Introduction

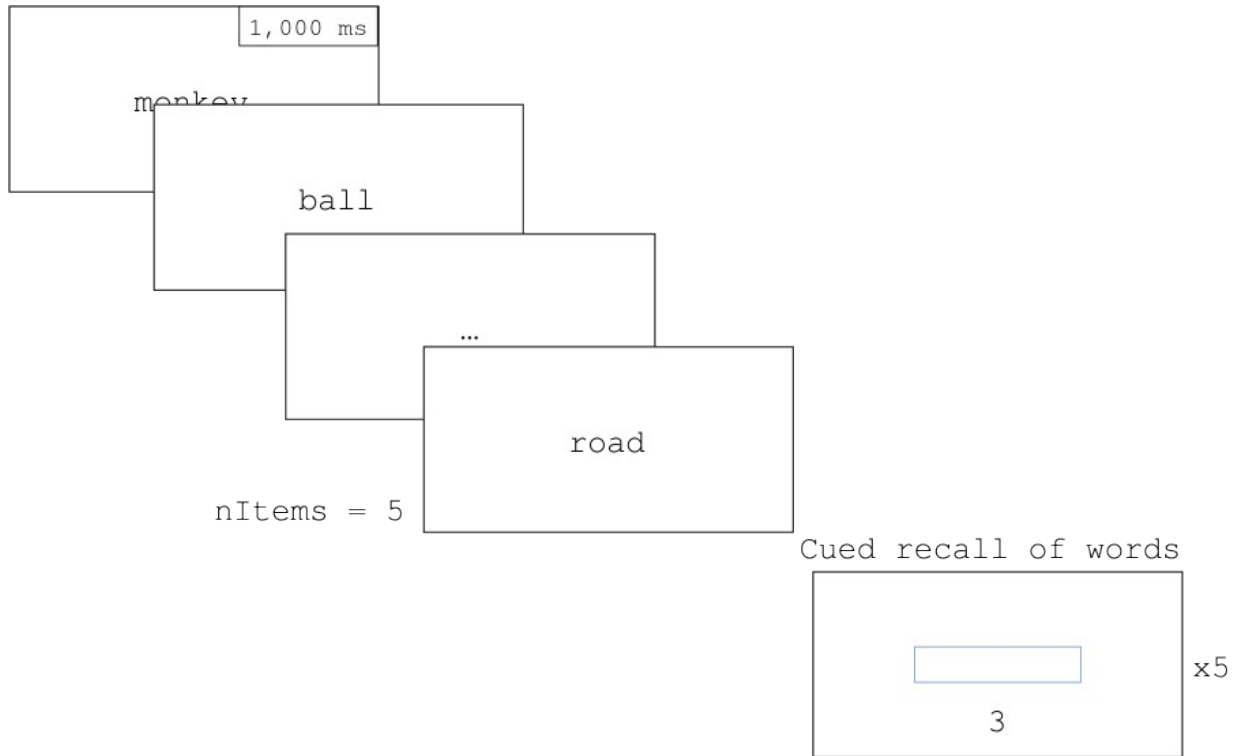


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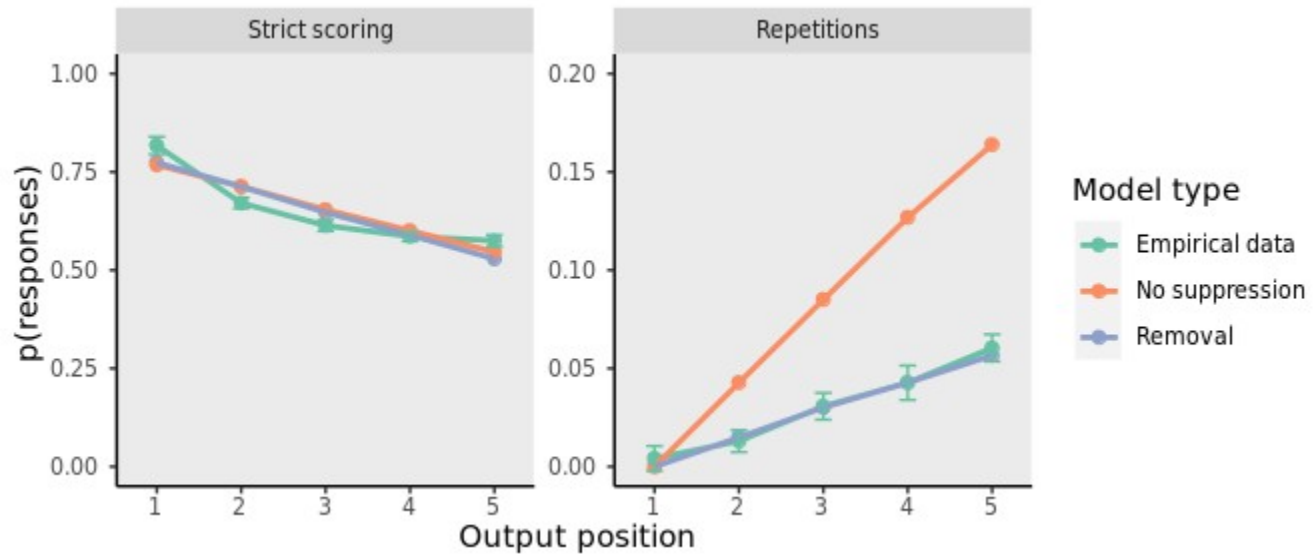
A form of reponse suppression is required in our working memory models.

To prevent repetition errors.

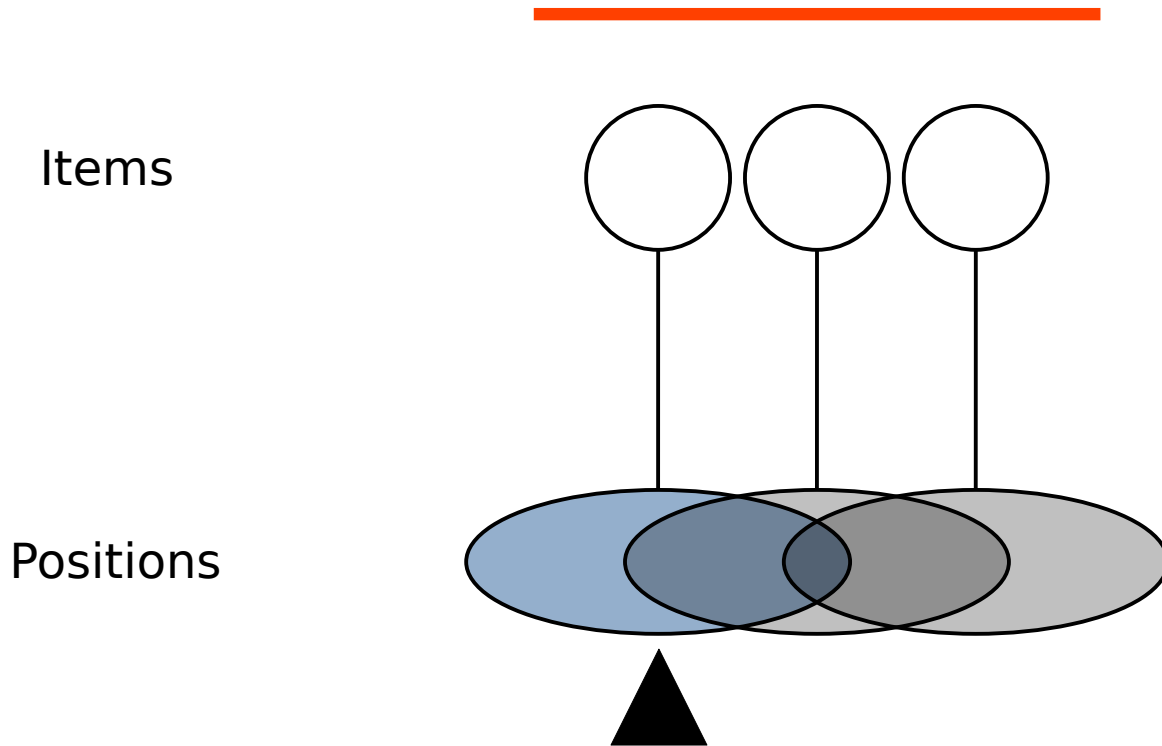
Experiment: Pilot



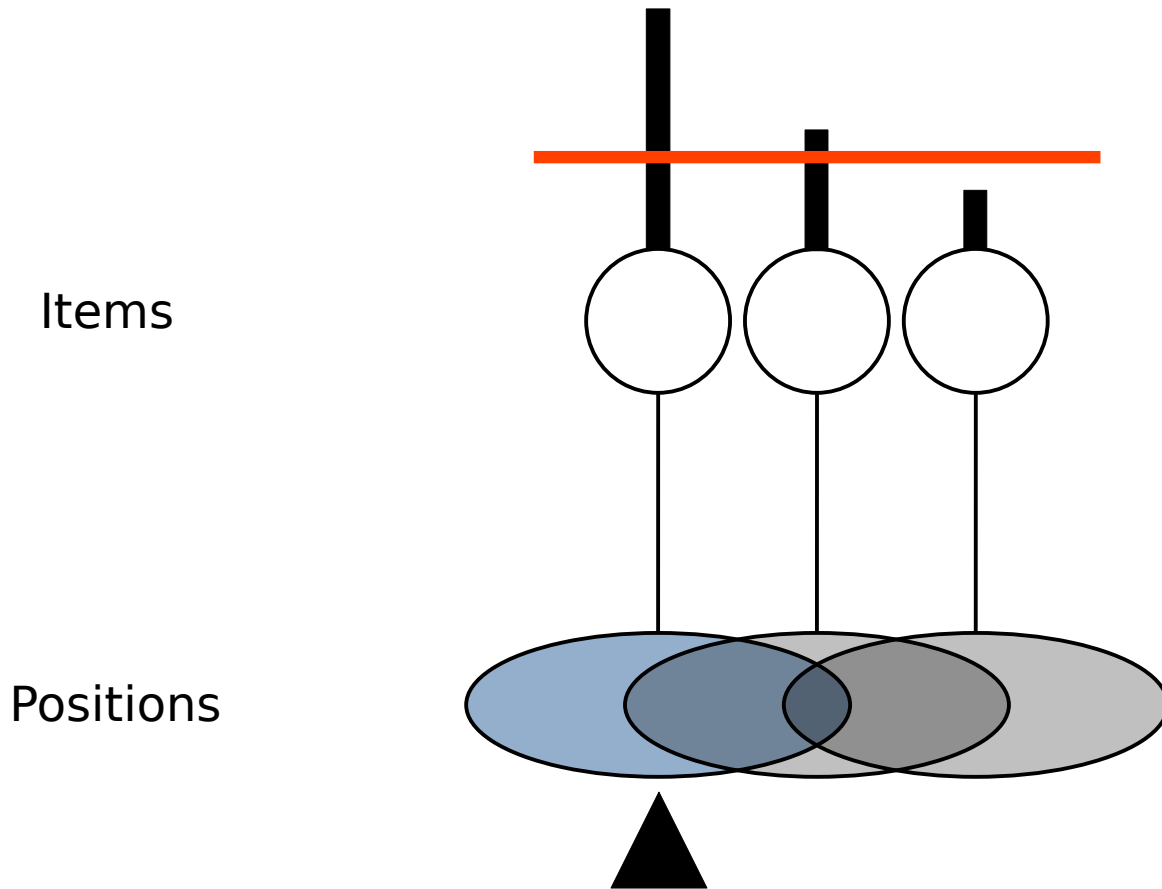
Experiment: Pilot



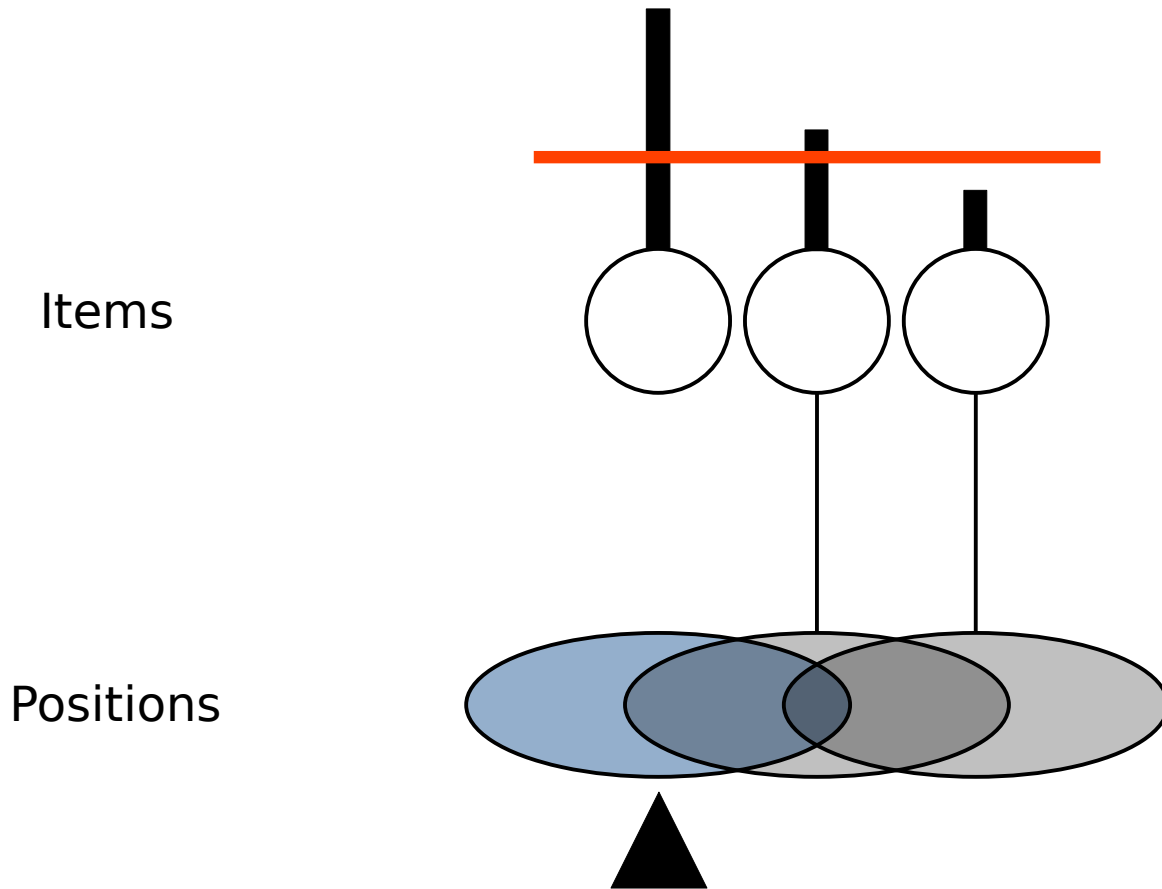
Predictions



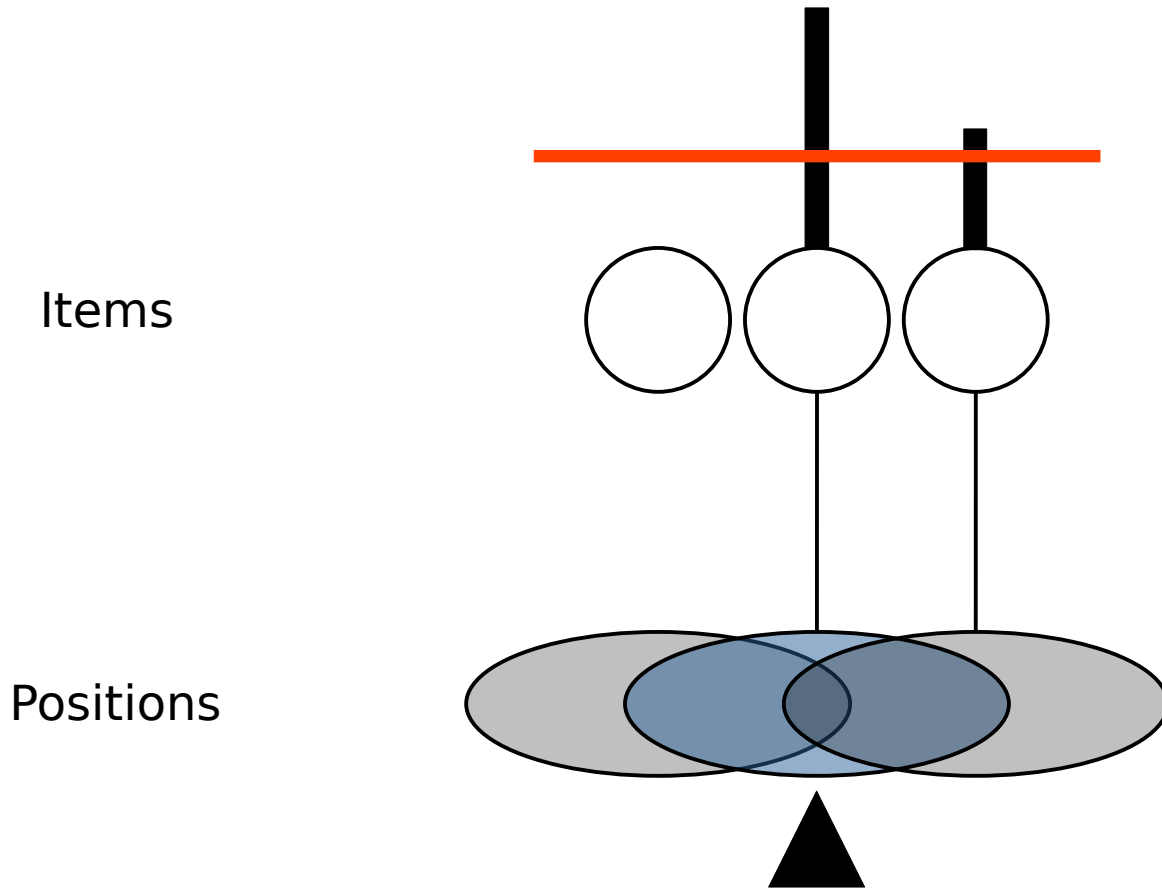
Predictions



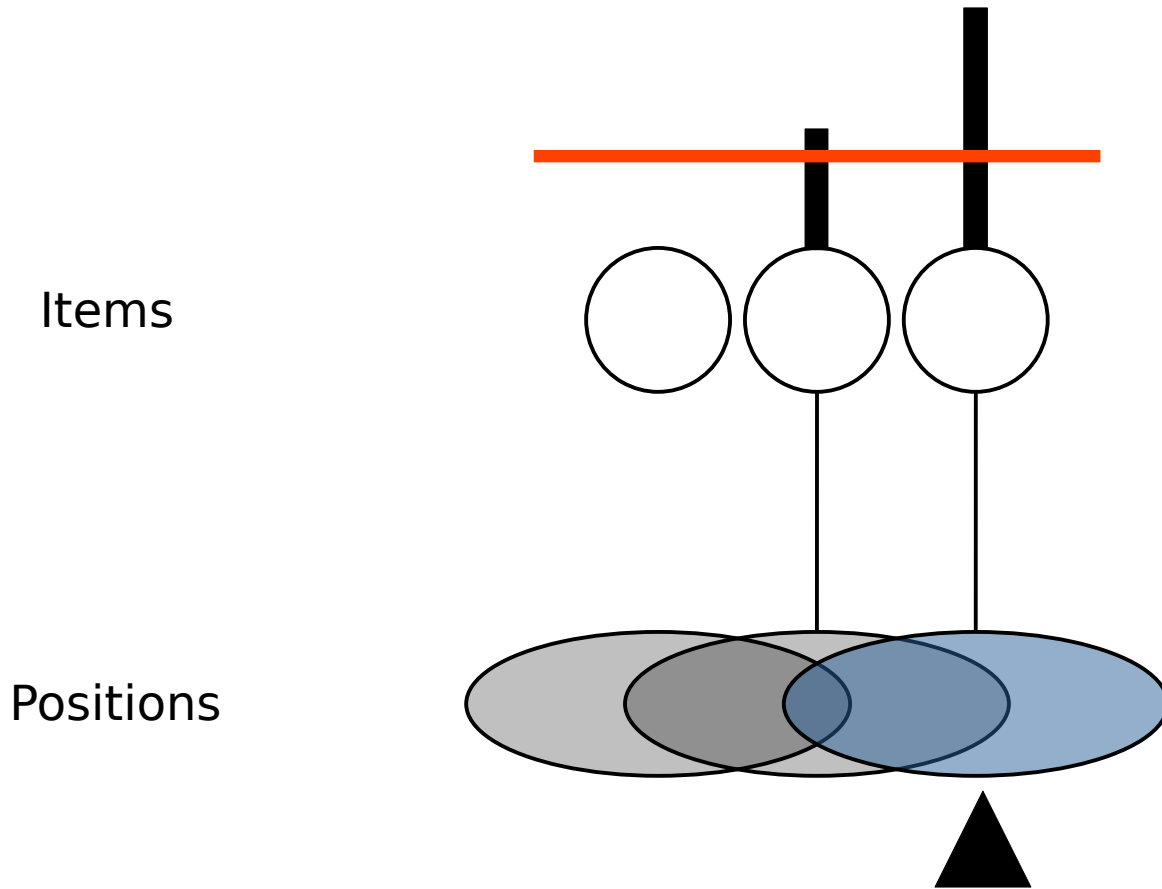
Predictions



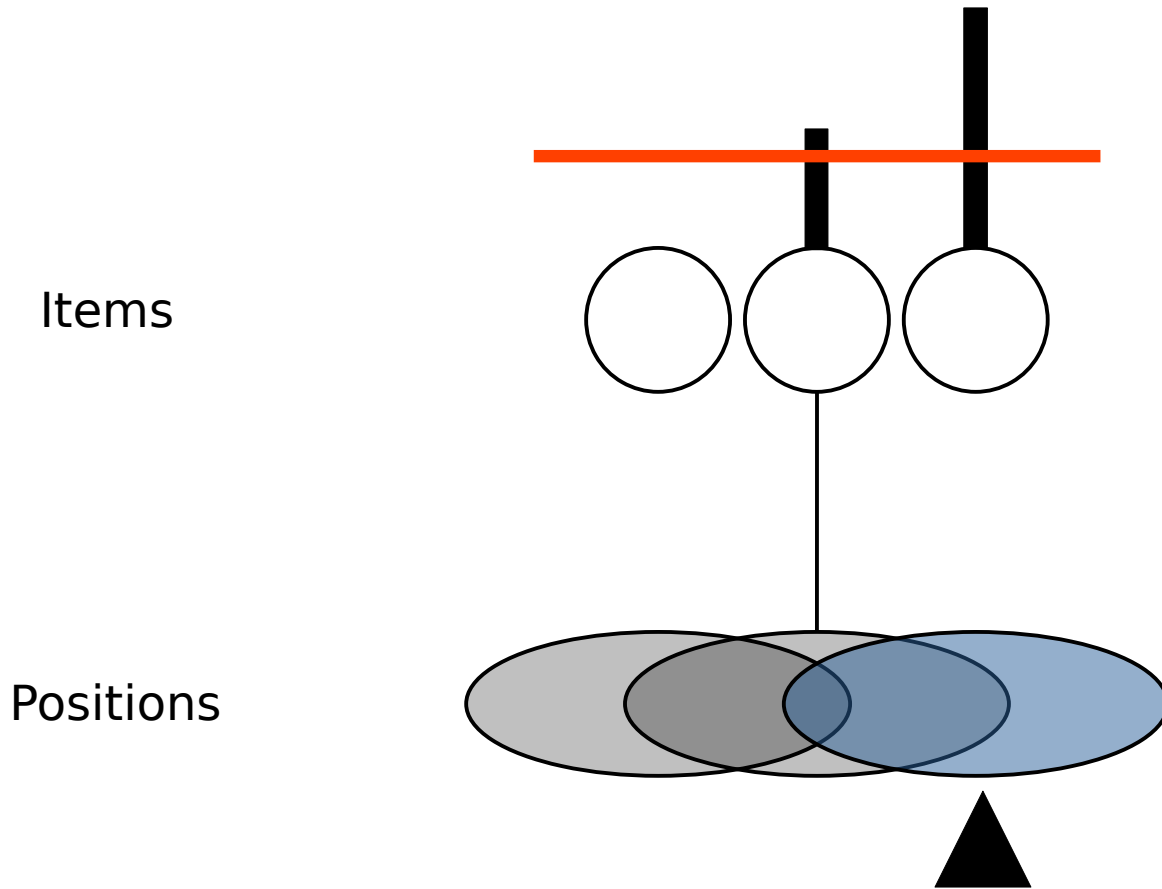
Predictions



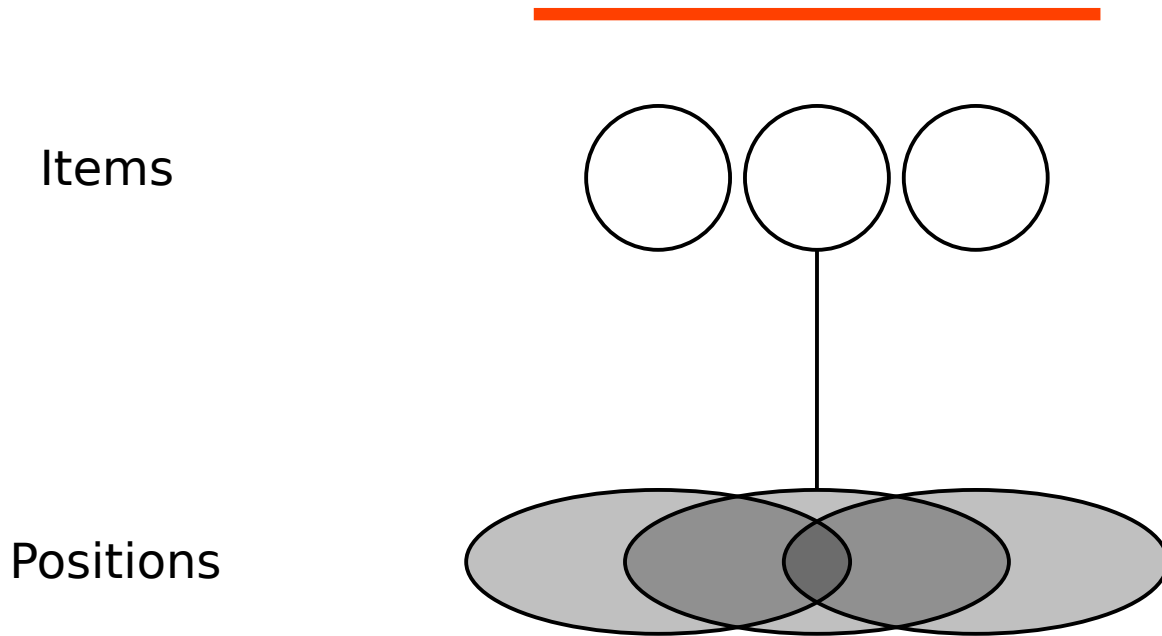
Predictions



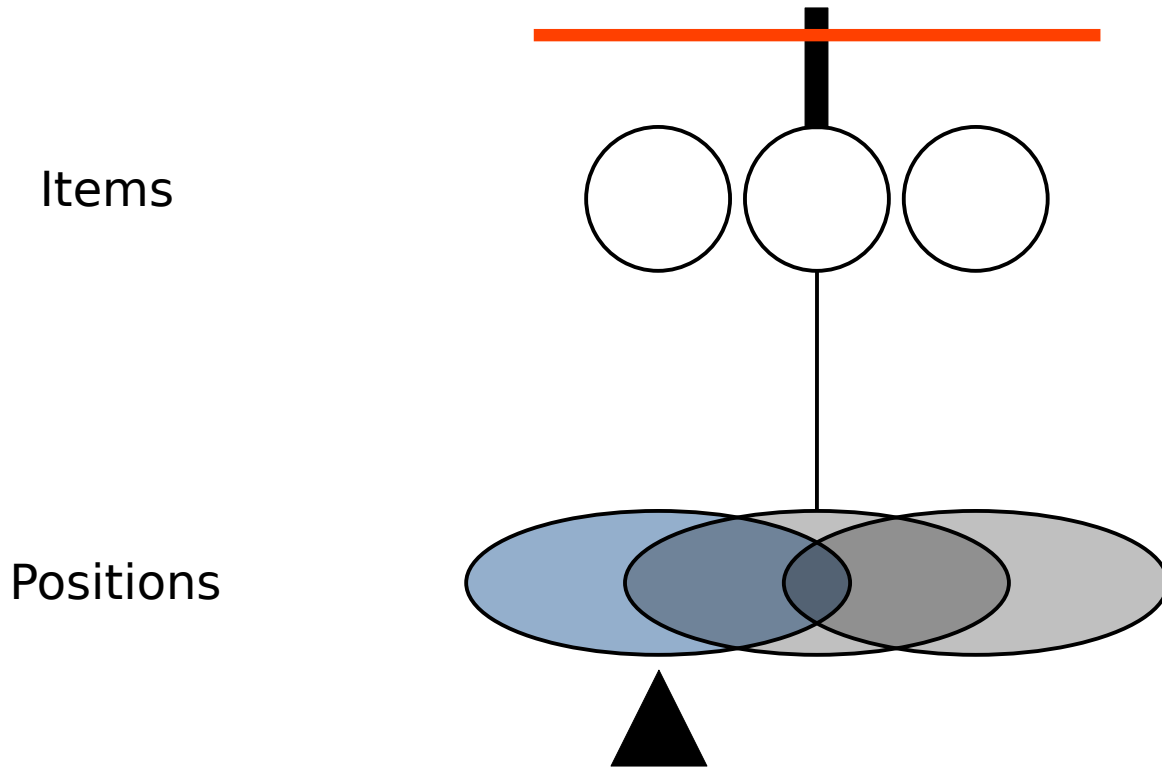
Predictions



Predictions



Predictions



Predictions

According to our models, memory performance should be impaired when the same item is tested again.

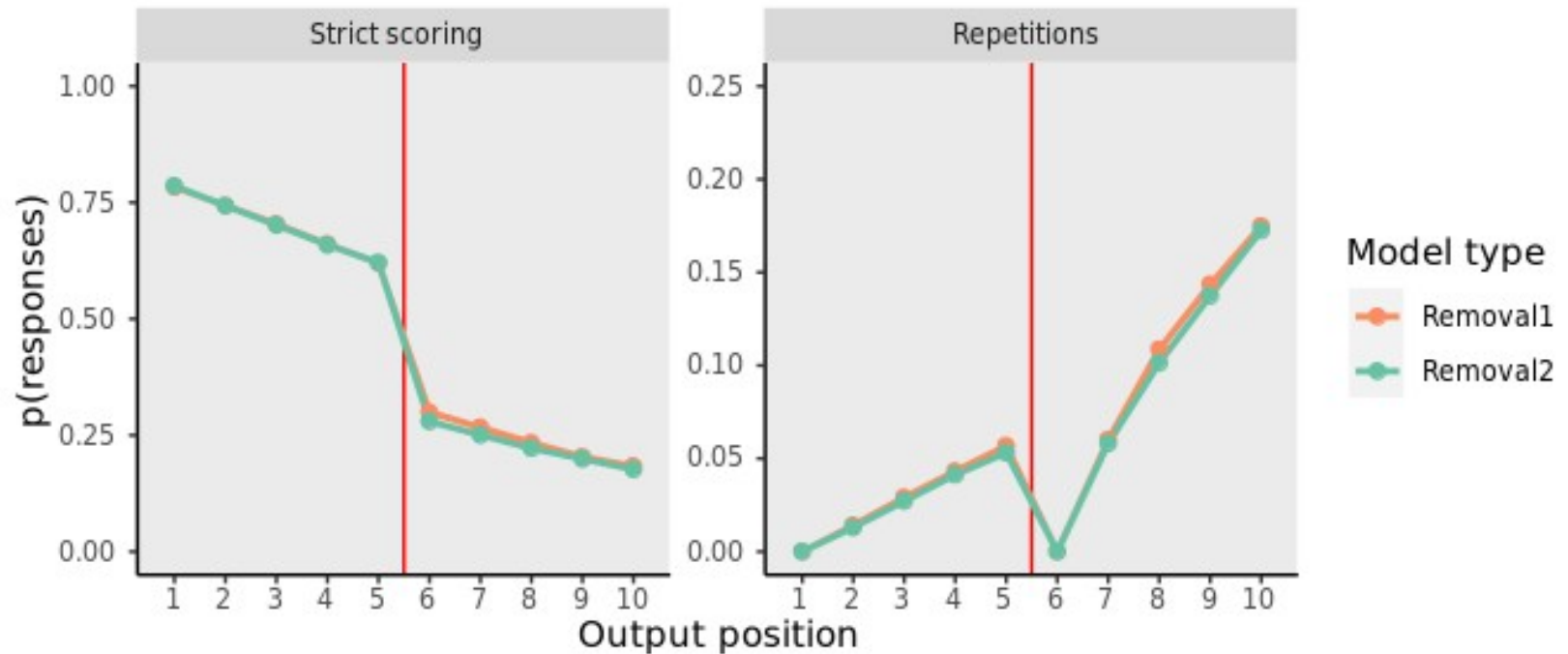
Exp. 1: Methods & predictions

ABCDE

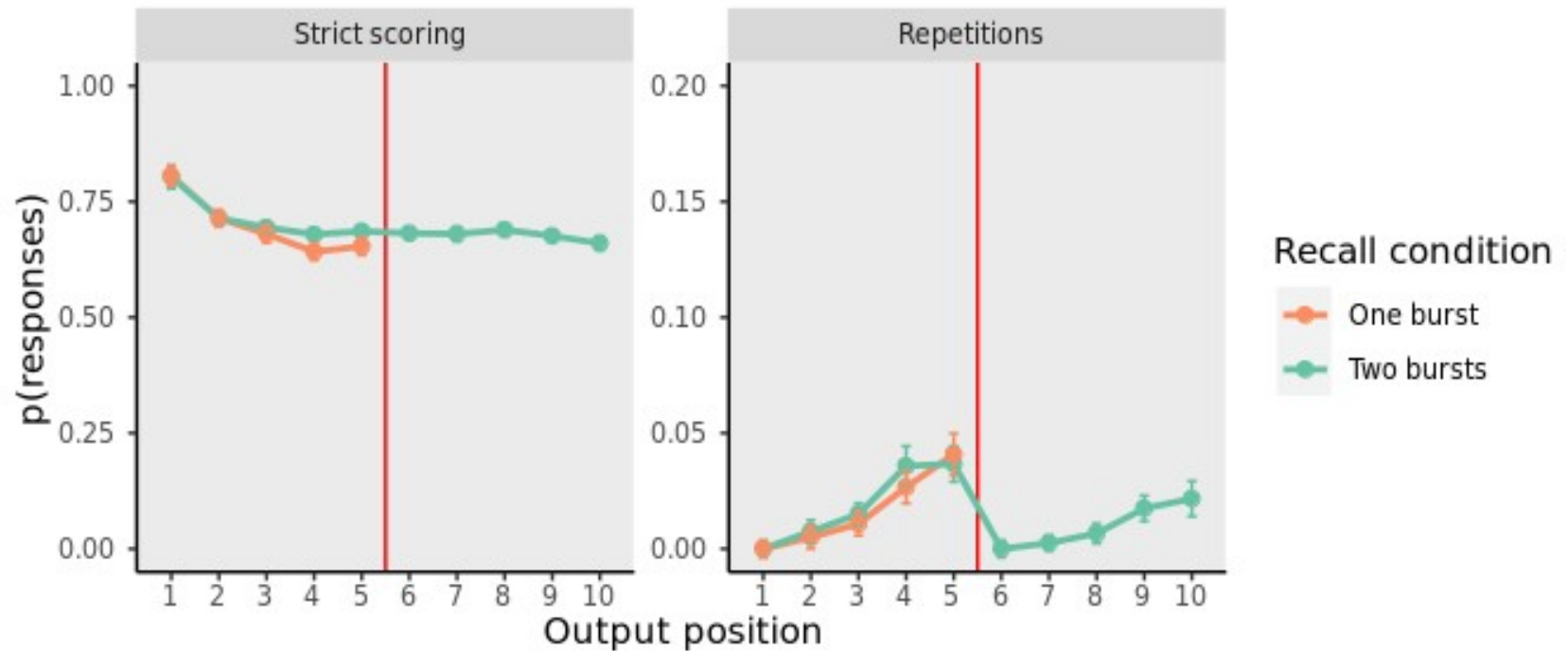
5321421543

ECBADBAEDC

Exp. 1: Methods & predictions



Exp. 1: Results



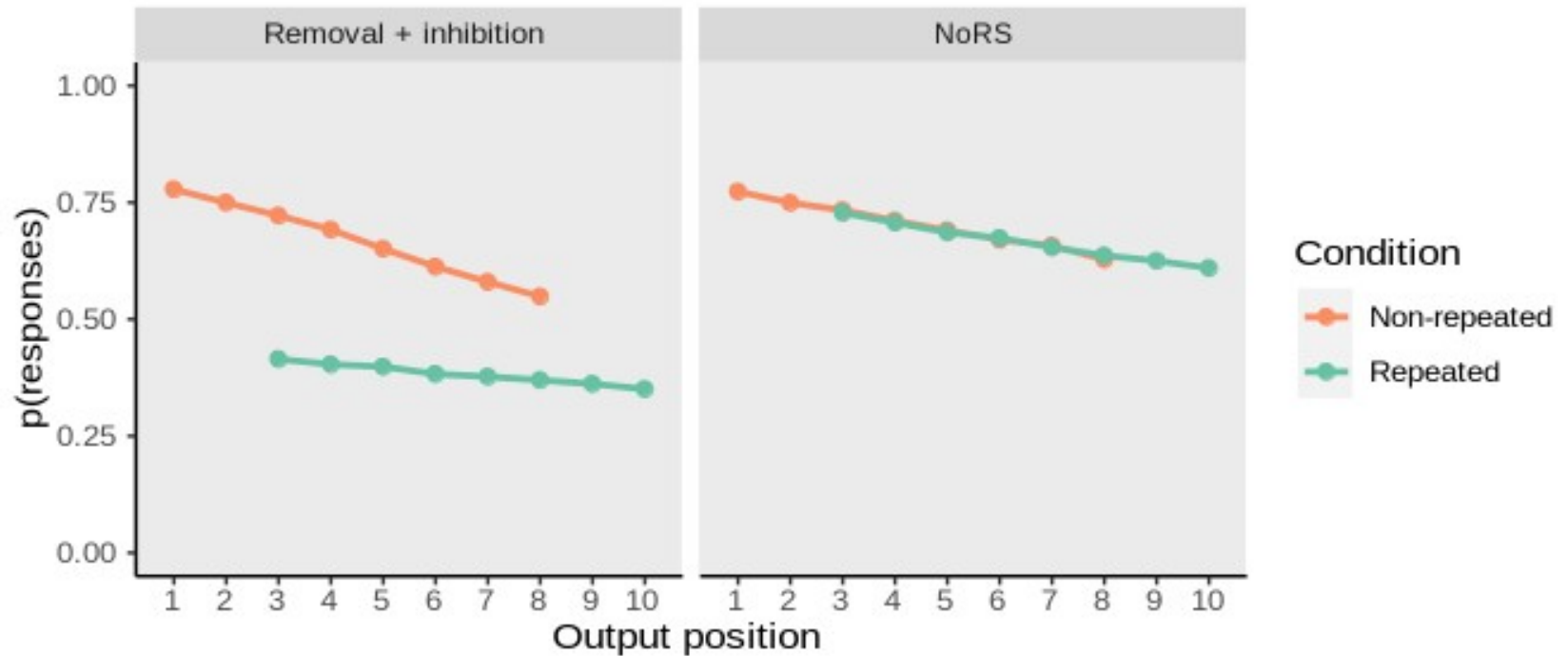
Exp. 2: Methods & predictions

ABCDE

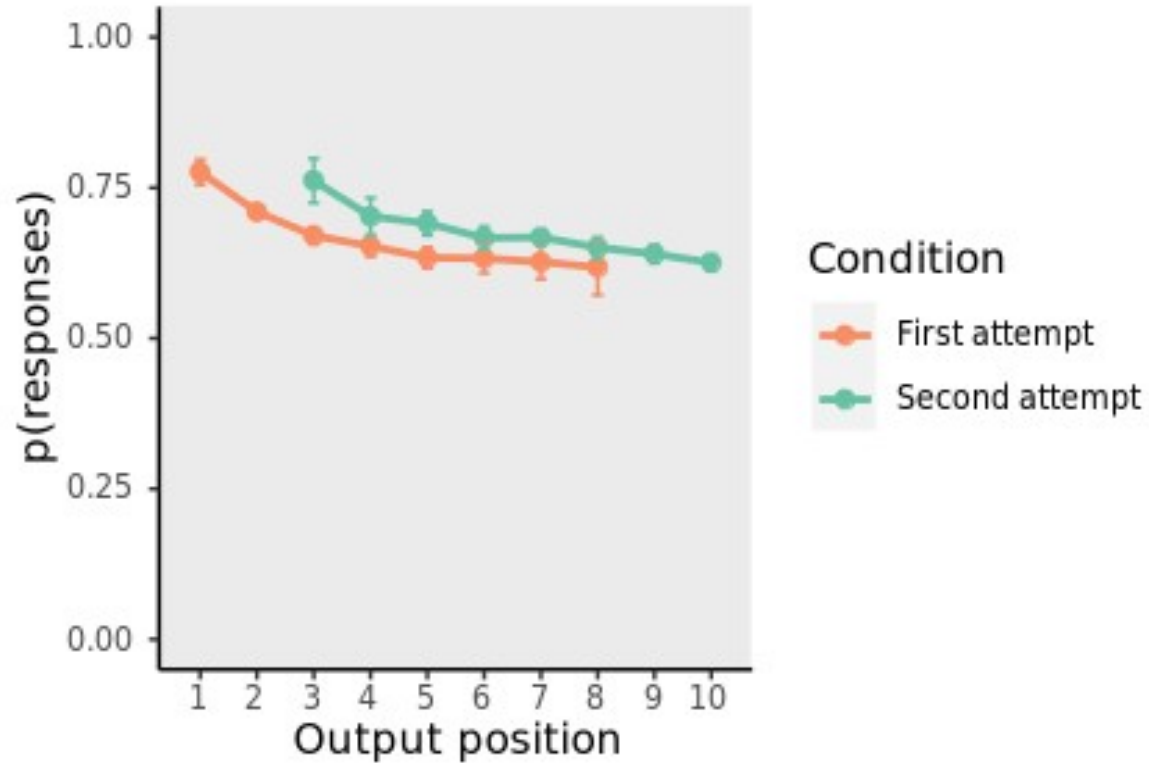
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ECBEDBCADA

Exp. 2: Methods & predictions



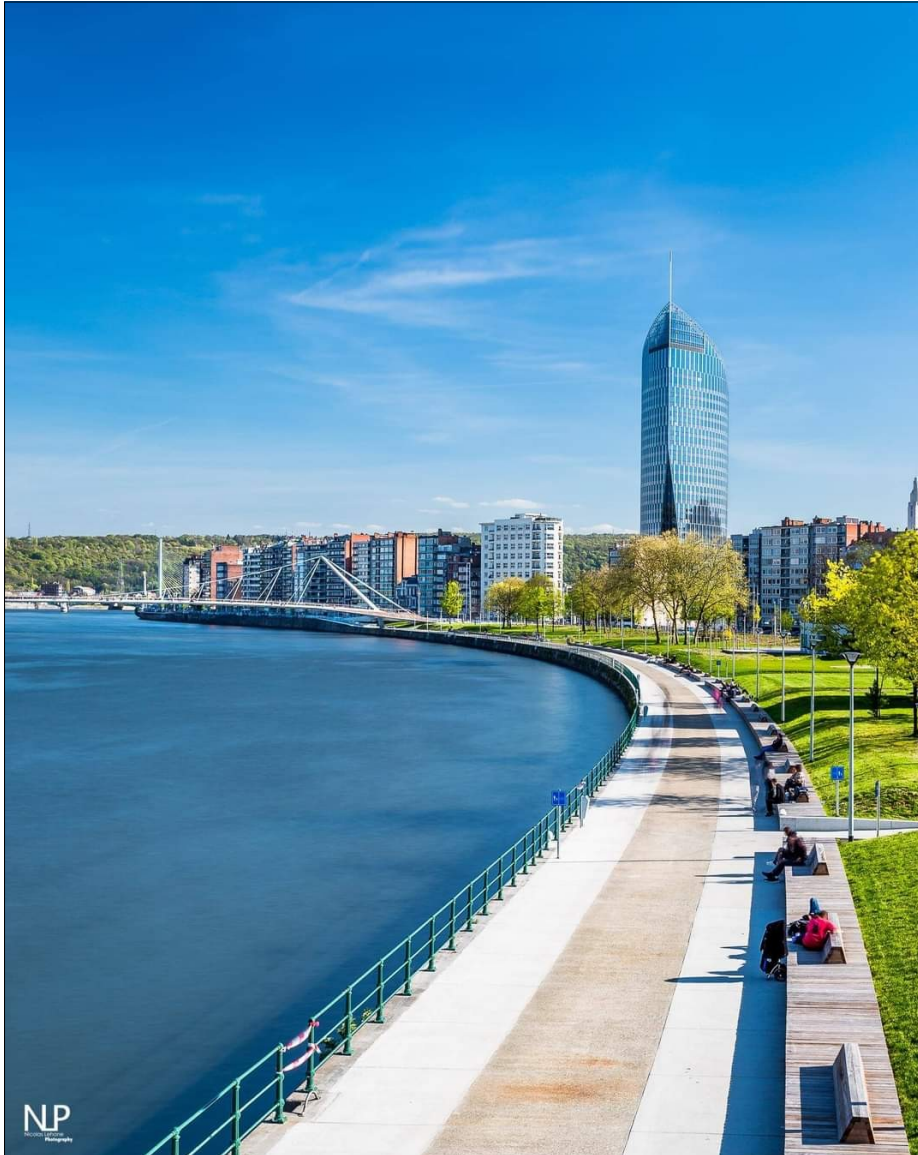
Exp. 2: Results



Strong evidence against response suppression as a way
to prevent repetition errors.

We need an alternative mechanism.

Keeping a record of recall events.



Danke schön
Merci
Dank u wel

