

# Cognitive and Phonological Effects on Confrontation Verb Naming

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## Background

There are demonstrated relationships between noun retrieval and a variety of factors. Recent investigations of these relationships include cognitive variables such as attention skills (Murray, 2000) and phonological neighbors (Gordon, 2002). It is unclear how phonological neighborhood density and cognitive factors may influence verb retrieval.

## Purpose

The current study evaluates the relationships between:

- Cognitive abilities and confrontation naming performance to determine possible offline cognitive influences on word retrieval skills
- Phonological neighborhood characteristics of aphasic patients' accurate and spontaneously erred verb productions

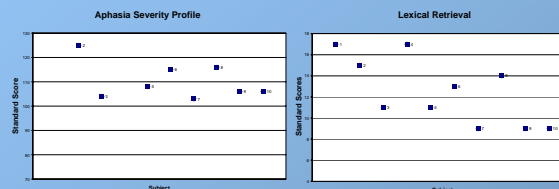
## Hypotheses

- It was anticipated that there would be a positive relationship between cognitive skills and verb naming performance
- It was anticipated that there would be a positive relationship between verb neighborhood density and verb naming performance

## Participants & Tasks

- 10 mild/moderate chronic aphasic participants completed:
- Aphasia Diagnostic Profiles* (Helm-Estabrooks, 1992)
- Philadelphia Naming Test* (Roach et al. 1996)
- Action Naming subtest of the *Verb and Sentence Test* (Bastiaanse et al., 2002)
- Counting and Counting with Distraction subtests of the *Test of Everyday Attention* (Robertson et al., 1994)
- Tompkins et al.'s (1994) working memory protocol

## Aphasia Severity



## Cognition and Verb Naming

	Counting	Counting With Distraction	WM
Verb RT	-0.006	-0.211	0.924**
Noun RT	0.068	-0.423	0.746*
Verb Acc	-0.031	0.029	-0.874**
Noun Acc	-0.017	0.002	-0.816**

\*\*=significant at .01    \*=significant at .05

- No significant correlations between attention conditions and either verb naming response time or accuracy
- Significant correlations between working memory condition and both verb naming response time and accuracy

## Estimating Density

- Density was defined as the number of real words which differed from the target by only the addition, subtraction or deletion of one phoneme
- Density was estimated by generating phonological neighbors for the noun form of a target verb and then eliminating noun neighbors which did not have a related present participle verb form (e.g., -ing)
- For target "sit", eliminate "sick" but not "sing"

## Density and Verb Naming

	Verb RT	Verb Acc	PhonPara
Density	-.034	.036	-.006
Log Dens	-.004	.001	.019
Frequency	-.016	.103*	-.111*

\*\*=significant at .01    \*=significant at .05

- No significant correlations between density or log of density value and either verb naming response time, accuracy or production of a phonological paraphasia
- Significant correlations between item frequency and both accuracy or production of a phonological paraphasia but not response time

## Conclusions

- Working memory but not attention skills seem to exhibit a positive relationship with verb retrieval skills
- Phonological neighborhood density does not appear to facilitate verb production

## Selected References

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