Name:_____

Student Number: _____

LINGUISTICS 2PS3

DAY CLASS
DURATION OF EXAMINATION: 2.5 HOURS
MCMASTER UNIVERSITY FINAL EXAMINATION

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December 2017

THIS EXAMINATION CONTAINS 4 PAGES AND 5 QUESTIONS. YOU ARE
RESPONSIBLE FOR ENSURING THAT YOUR COPY OF THE PAPER IS COMPLETE.
BRING ANY DISCREPANCY TO THE ATTENTION OF YOUR INVIGILATOR.

This paper must be returned with your answers.

Write all your answers in the exam booklet. You may answer the questions in any order
you wish, as long as you number your answers clearly.

Part A: 5 points each for a total of 10.

1. Give a brief description of the research study that your team presented. Make sure to
    mention what method the researchers used, what the key findings were, and how the
    researchers interpreted their findings.

2. Give a brief description of a research study that was presented by any team other than
    your own. Make sure to mention what method the researchers used, what the key
    findings were, and how the researchers interpreted their findings.

Part B: 10 points each for a total of 30.

3.   A team of Canadian researchers were interested in how word meanings are represented in the mind, and how word meanings affect the process of word recognition. They gathered ratings of Body Object Interaction (BOI) for a set of words by asking participants to rate how easy or difficult it is for a human body to interact with the thing that the word refers to. So, for example, words like *belt, flute, stool* have a high BOI rating and words like *cloud, lace, ship* have a low BOI rating. The researchers made sure to match these two sets of words on other variables in order to control for the effects of frequency, familiarity, and other factors that are known to affect word recognition.

The researchers used the BOI-rated words in a visual lexical decision task, along with a set of pseudohomophones – wordforms like *nale* and *shurt* that are not real words of English but, if spoken aloud, would sound like actual words. The results of the lexical decision task are presented below:

Stimulus	Response Latency (ms)
High BOI	628
Low BOI	663
Pseudohomophone	817

Responses to both real-word conditions were significantly faster than to the pseudohomophone condition, and responses to High BOI words were significantly faster than to Low BOI words.

Offer an interpretation of these results by explaining the cognitive processes involved in word recognition in a lexical decision task. In other words, what happens in the mind from the moment the written stimulus is presented visually to the moment the participant presses a button to make the decision? And how do the differences across the three conditions influence these cognitive processes?

4. Speech perception researchers are interested not just in whether humans can discriminate within phonemic categories, but in how long it takes us to do so. One experiment measured listeners' reaction times in discriminating pairs of synthesized syllables on the **/pa/-/ba/** continuum. The graph pictured below shows the results.
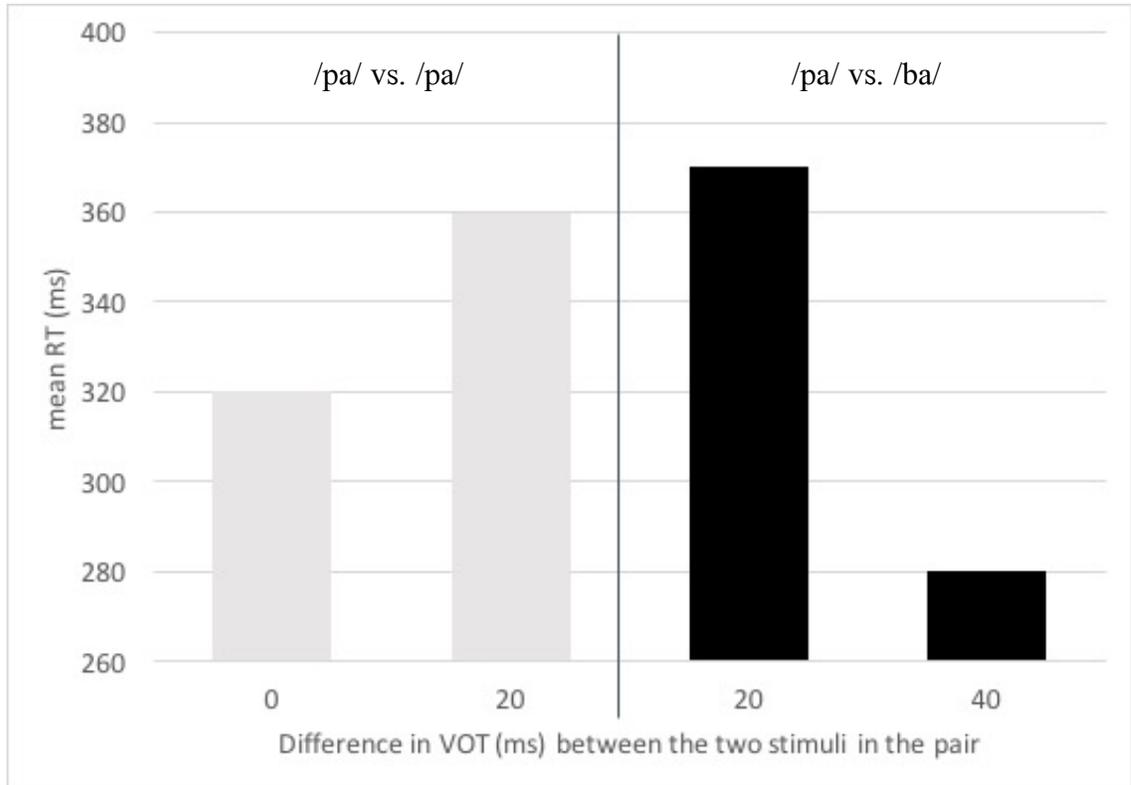

The grey bars on the left represent the reaction times for pairs of stimuli that fell within the **/pa/** category, which listeners said were the same. For example, the leftmost grey bar could correspond to a pair of stimuli that both have a VOT of 50 ms, while the larger grey bar could represent a pair of stimuli where one had a 50-ms VOT and the other had a 70-ms VOT. The black bars on the right represent pairs of stimuli that crossed the **/pa/-/ba/** category and which listeners said were different. So, for example, the tall black bar could represent a pair of stimuli with VOTs of 20 and 40 ms, and the short black bar could represent a pair with VOTs of 10 and 50 ms.

The difference between the two grey bars is statistically significant and so is the difference betweent the two black bars. The researchers do not report a statistical comparison between the two middle bars. Are these results consistent with the idea that English-speakers' perception of the voicing contrast is completely categorical? Explain your answer.

5. Some sentence-processing researchers investigated the real-time comprehension of sentences that contained scalar adjectives such as *tall*. Participants' eye-movements were tracked while they looked at one of four visual displays and followed spoken instructions such as, *"Pick up the tall glass and put it below the pitcher."*

Consider first conditions A (left) and B (right). Given what you know about referential context effects, predict what differences in eye movements researchers will observe between these two conditions, focusing especially on the region *"the tall glass"*. Explain the rationale for your predictions.

Target		Contrast

Target		Contrast

Competitor		Distractor
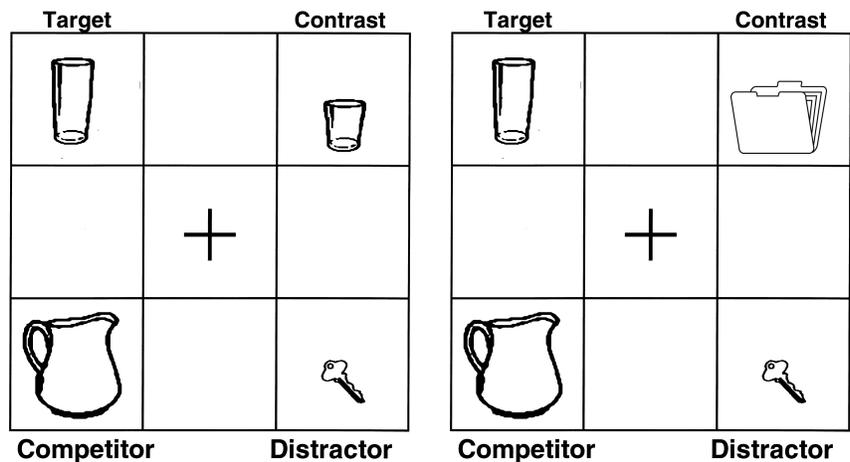
Next consider conditions C (left) and D (right). Notice that the glass in the top-left corner is not as tall in C and D as the one in A and B. In other words, it is not as prototypical an example of something "tall". How will eye movements in these two conditions differ from those observed in A and B? Why?

Target		Contrast

Competitor		Distractor

THE END