

This homework has two parts. Part 1 involves running a small experiment and bringing the data to class on Wednesday, 5/8 (5 points). Part 2 involves analyzing the data in class and turning in a summary of the results (10 points).

First, find two naive native speakers of American English. Record the first speaker saying each pair of words out loud and adding a new word to each pair. In other words, this speaker is producing spoken triplets: patch, prop, (word of their choice). Have the second person read the pairs silently and write down a new word for each pair. Participants can add any word they want.

Be sure that the participants are not aware of each other's responses, and reassure them that their responses will be kept anonymous and are being used solely as part of an in-class exercise.

Transcribe the first speaker's spoken responses and bring both sets of responses to class on Wednesday, 5/8. Make sure you can tell which set was spoken and which set was written.

1. patch, prop, _____
2. book, newspaper, _____
3. bait, bacon, _____
4. key, chair, _____
5. physician, midwife, _____
6. whale, spider, _____
7. pod, naked, _____
8. rose, daisy, _____
9. peak, peck, _____
10. bit, slip, _____
11. goodness, infinity, _____
12. dapple, grapple, _____
13. write, frown, _____
14. claps, flap, _____
15. laughter, winner, _____
16. rabid, rabbit, _____
17. square, red, _____
18. stomach, lung, _____
19. grape, run, _____
20. buy, lend, _____

The word pairs in this "duality of patterning" experiment vary in one of two dimensions: **how much they sound alike** (their phonological similarity) or **how related they are in meaning** (their semantic similarity).

Step 1. Using the grid on the back of this page, compare each response (the word the participant gave) to the word that came immediately before it by figuring out how many **phonemes** they share in common. This means that you have to count the number of **sounds** that are the same in both words, and that's different than counting the number of letters.

Step 2. Now add up the numbers in the same columns on the back and transfer them to the table below. You will have numbers for each type of response (spoken or written) and for each dimension of similarity.

	Spoken	Written
Weakly semantically related		
Strongly semantically related		
Weakly phonologically related		
Strongly phonologically related		

Step 3. Answer the questions on the following pages using specific numbers or examples to support your claims where appropriate. **In some cases you will need to actually calculate the answer (i.e., add numbers to arrive at a particular total).**

LING/PSYCH 371
Homework #4

		SPOKEN				WRITTEN				
1.	WP	patch, prop,		X	X	X		X	X	X
2.	SS	book, newspaper,	X		X	X	X		X	X
3.	SP	bait, bacon,	X	X		X	X			X
4.	WS	key, chair,	X	X	X		X	X	X	
5.	SS	physician, midwife,	X		X	X	X		X	X
6.	WS	whale, spider,	X	X	X		X	X	X	
7.	WP	pod, naked,		X	X	X		X	X	X
8.	SS	rose, daisy,	X		X	X	X		X	X
9.	SP	peak, peck,	X	X		X	X			X
10.	WP	bit, slip,		X	X	X		X	X	X
11.	WS	goodness, infinity,	X	X	X		X	X	X	
12.	SP	dapple, grapple,	X	X		X	X			X
13.	WS	write, frown,	X	X	X		X	X	X	
14.	SP	claps, flap,	X	X		X	X			X
15.	WP	laughter, winner,		X	X	X		X	X	X
16.	SP	rabid, rabbit,	X	X		X	X			X
17.	WS	square, red,	X	X	X		X	X	X	
18.	SS	stomach, lung,	X		X	X	X		X	X
19.	WP	grape, run,		X	X	X		X	X	X
20.	SS	buy, lend,	X		X	X	X		X	X
		TOTALS								
			WP	SS	SP	WS	WP	SS	SP	WS

WP = weakly phonologically related

SS = strongly semantically related

SP = strongly phonologically related

WS = weakly semantically related

Remember to support your answers with specific numbers or examples.

Question 1. Is there a difference in the number of sounds in common when the preceding word pairs are phonologically related as opposed to when they are semantically related? Note that this question is **not** asking about either the weak/strong or spoken/written aspects of the experiment.

Question 2. Is there a difference in the number of sounds in common when the responses are spoken as opposed to written?

Question 3. Did the weak/strong dimension have an effect on the number of sounds in common?

Question 4. Looking again at the actual responses (the words themselves), was there any pattern for the semantically related pairs?

Question 5. What might these patterns tell us about language and language processing? (Hint - think about levels of representation, the speech errors that you've been collecting, and how the lexicon might be organized.)

Question 6. Can you think of a way to quantify and/or model the responses to the semantically related pairs?