from **What Makes a Pun Funny** (informational)
by Virginia Hughes

My name is Ginny and I'm an adult pun-lover. When I hear a good one — Photons have mass? I didn't even know they were Catholic! — I don't roll my eyes or **smirk**. I double over laughing, like a 7-year-old.

What is it exactly that makes a pun funny (at least to those of us who humbly accept the power of the pun)?

That's the **underlying** question of a brain imaging study I came across last week. . . . The researchers, led by Adrian Owen at the University of Western Ontario, focused on three types of jokes:

Regular joke: Why did Cleopatra bathe in milk? Because she couldn't find a cow tall enough for a shower.

Funny pun: Why were the teacher's eyes crossed? Because she couldn't control her pupils.

Unfunny pun: What was the problem with the other coat? It was difficult to put on with the paint-roller.

The regular joke and the funny pun are both amusing, but for different reasons: in the decidedly unfunny **parlance** of humor **theorists**, the pun has "semantic **ambiguity**" and the joke does not. Part of the fun in the funny pun, in other words, is thinking through the two meanings of *pupil*.

But now compare the funny pun and the unfunny pun. Both have semantic ambiguity. So why is the funny one funny? The researchers say it's because both meanings of the ambiguous word (pupil) are true at the same time, **whereas** in the unfunny pun, only one of the meanings of the ambiguous word (coat) is true.

Reading each joke produces a distinct **cognitive** experience, at least for me. So I'd guess that my brain is doing a different kind of processing for each. The study investigated this using a functional magnetic resonance imaging (fMRI) machine, which measures blood flow (and therefore, indirectly, **neuron** activity) in the brain. A dozen adult volunteers rolled on their backs into the scanner and listened to recordings of jokes and sentences read out loud as the machine recorded their brain activity.

Humor is complicated, apparently. Many, many areas of the brain light up more during jokes (regular or puns) than non-jokes, the study found. These include the amygdala, which processes emotions, the hypothalamus, which is responsible for a lot of automatic processes, like temperature and hormone control, and the ventral striatum, which is involved in the reward system. . . .

But the most interesting **data** concerns a little-known brain region called the inferior frontal gyrus (IFG), a ridge on the bottom half of the frontal lobe. The left IFG lights up more during funny puns than regular jokes, and shows more activity during funny puns than unfunny puns, the study found. So this tiny little area, it seems, is the part of our brain that **distinguishes** between funny and unfunny, at least in these participants and for these kinds of jokes.

Exercise 1: Context Clues

Read the selection, paying special attention to the words in dark type. These are the Master Words you will study in this lesson. As you read, look for context clues in the sentences and paragraphs around each Master Word. Circle any words and phrases that give clues to the meaning of the Master Words.

Master Words
Place a check by words you feel you know; underline words you don't know.

ambiguity	data	neuron	smirk	underlying
cognitive	distinguish	parlance	theorist	whereas

Exercise 2: Using Context Clues

Fill in the form for each of the Master Words listed below with context clues (if any), your definition, and the dictionary definition. If you have difficulty writing a definition, try using the word in a sentence instead.

1. **ambiguity**   Part of Speech: *n.*   Context Clues:_____

    Your Definition:_____

Dictionary Definition:_____

2. **cognitive**   Part of Speech: *adj.*   Context Clues:_____

    Your Definition:_____

Dictionary Definition:_____

3. **data**   Part of Speech: *n.*   Context Clues:_____

    Your Definition:_____

Dictionary Definition:_____

4. **distinguish**   Part of Speech: *v.*   Context Clues:_____

    Your Definition:_____

Dictionary Definition:_____

5. **neuron**   Part of Speech: *n.*   Context Clues:_____

    Your Definition:_____

Dictionary Definition:_____

6. **parlance**   Part of Speech: *n.*   Context Clues:_____

    Your Definition:_____

Dictionary Definition:_____

7. **smirk**   Part of Speech: *v.*   Context Clues:_____

    Your Definition:_____

Dictionary Definition:_____

8. **theorist**   Part of Speech: *n.*   Context Clues:_____

    Your Definition:_____

Dictionary Definition:_____

9. **underlying**   Part of Speech: *adj.*   Context Clues:_____

    Your Definition:_____

Dictionary Definition:_____

10. **whereas**   Part of Speech: *conj.*   Context Clues:_____

    Your Definition:_____

Dictionary Definition:_____

Exercise 3: Using Words in Context

Correct or Incorrect: Write **C** on the line if the word is used correctly; write **I** if the word is used incorrectly.

_____ 1. It is rude to **smirk** at the older folks dancing when they get on the dance floor.

_____ 2. The **underlying** meaning of the poem became clear once I understood the poet's central images.

_____ 3. The baseball player had a unique **parlance** when he stood in the batter's box.

_____ 4. Stephen Hawking is a well-known **theorist** who speculates on the nature of the universe.

_____ 5. My teacher said my essay was full of **ambiguity** and praised me for the clarity of my writing.

_____ 6. My favorite ice cream is peppermint stick **whereas** my friend Linda likes the same flavor.

_____ 7. Doing crossword puzzles is a good way to improve your **cognitive** abilities.

_____ 8. The **neurons** make it impossible for the brain to tell muscles to move.

_____ 9. There is a large amount of **data** about the dangers of texting and driving.

_____ 10. The twins look so much alike that it is difficult to **distinguish** between them.

Exercise 4: Sentence Completion

From the Master Words, choose the appropriate word for the blank in each of the following sentences. Write the word in the space provided at the right.

1. Coach says ...?... preparation for a game is just as important as physical training.   _____

2. Researchers are gathering ...?... about how walking affects heart health.   _____

3. The ...?... of teenagers is not always easy for their parents to understand.   _____

4. Eric is confident that none of his fellow football players will ...?... when he tries out for the school musical.   _____

5. Ethan excels at soccer ...?... Sam is good at baseball.   _____

6. The ...?... idea behind the new audio map application is to help people with visual impairments find their way around.   _____

7. My physics professor is a ...?... who is interested in studying dark matter.   _____

8. When ...?...(s, es) are damaged, nerve impulses are not sent correctly.   _____

9. Different colored uniforms allow spectators to ...?... the home team from the visitors.   _____

10. The ...?... of Lauren's answer made it unclear whether she was going to the party or not.   _____

Exercise 5: Related Words and Meanings

The italic words in the sentences below are related to the Master Words. Write the matching synonym from the list on the line following the sentence.

ambiguity	cognitive	distinguish	theorist	underlying

1. Her *basic* fear of ticks is what made Anna hesitant about going camping. _____

2. The teacher asked the students to *categorize* the vocabulary words based on their part of speech. _____

3. The ending of the mystery story left the reader with a feeling of *uncertainty*. _____

4. After a second concussion, David noticed some of his *mental* functions were slower than normal. _____

5. Although she is a brilliant *scientist*, Ms. Cruz is able to explain complex ideas in simple ways. _____

Exercise 6: Puns

A pun is a play on words, usually involving words or phrases that sound alike but have different meanings. In her article, Virginia Hughes analyzes how the double meaning of words contributes to making puns funny. In her first example—"Photons have mass? I didn't even know they were Catholic!"—the word *mass* has a double meaning. To a scientist, *mass* means "quantity of matter:" To a Catholic, mass is a ritual.

In the chart below, explain the meaning of each of the puns shown in the first column. Use a dictionary if necessary. An example has been done for you.

Examples of Puns	Meaning
The thief who stole a calendar got twelve months.	The thief got twelve months in prison for getting twelve months when he stole the calendar.
It wasn't school Jaden disliked; it was just the principal of it.	
In William Shakespeare's *Romeo and Juliet*, Mercutio says, as he is dying, "Ask for me tomorrow and you shall find me a grave man."	
In Shakespeare's *Julius Caesar*, a cobbler says, "I am a mender of men's soles."	

Write About It: Puns in Literature

Find examples of puns in a novel, short story, play, or poem. Works known for puns range from Shakespeare's plays to *Alice in Wonderland* to the Harry Potter series, and countless others. **Write a paragraph** explaining the meaning of the puns and the purpose they serve in the work of literature. Use at least four Master Words or words related to the Master Words in your paragraph.