

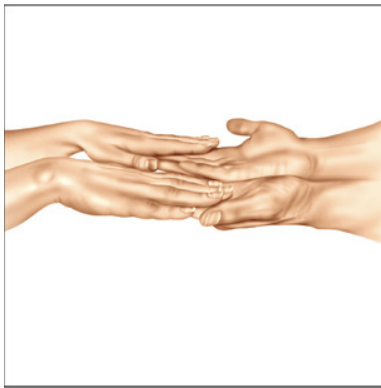
Selective Attention

Selective attention is the focusing of conscious awareness on a particular stimulus.

Selective Attention

Researchers have found that conscious attention is limited. One property of consciousness is that it is resistant to division (property of unity). It is difficult to divide our attention. Magicians know how to redirect attention

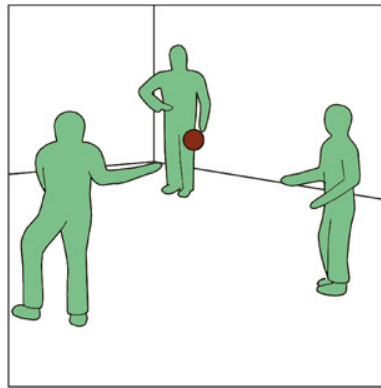
In one study, research participants pressed a button when two people played a game when a person slapped the other person's hands (panel a). Next participants pressed a button when the ball was passed to another person (panel b). They did each of these tasks easily.



A

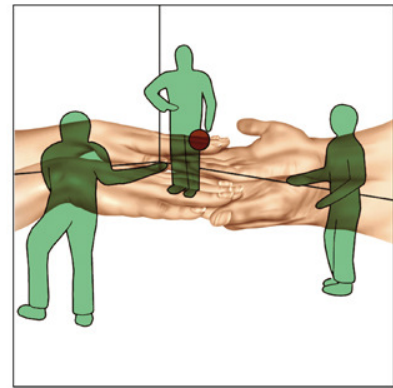
Image source: Schacter et. al.

Easy



B

Easy



C

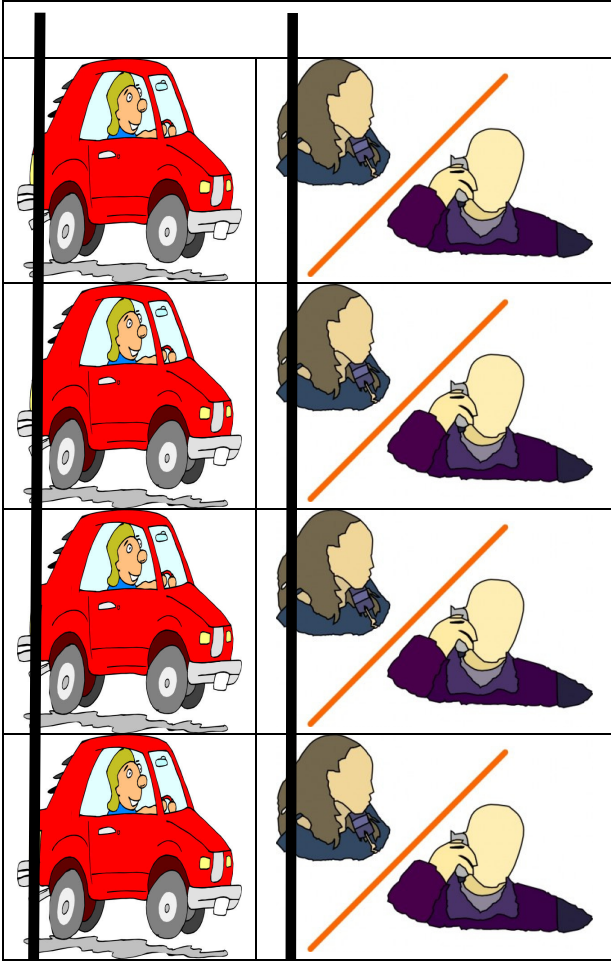
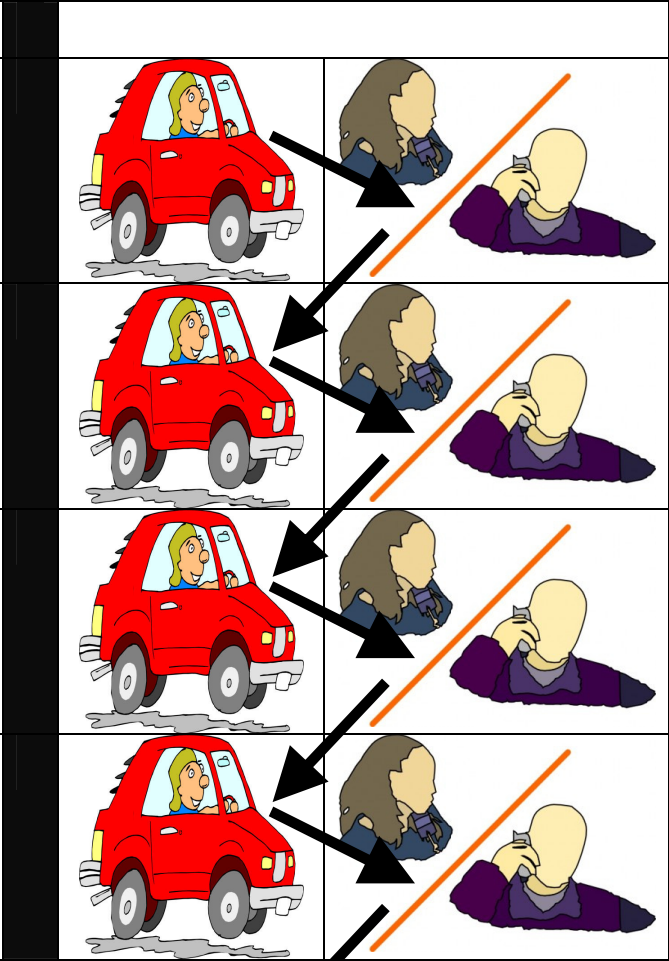
Both A & B
Difficult

However, when they did these tasks simultaneously, their error rate was eight times greater while “multi-tasking”

What is the Psychology of Multitasking?

When people are multitasking, they are switching between tasks, you really aren't doing two things simultaneously. You are switching between your different tasks.

Multitasking: Driving and Talking on the Cell Phone

| What people commonly believe about multitasking | What is occurring while multitasking |
|--|---|
| We believe we can do multiple tasks simultaneously | We are switching between tasks |
|  |  |

What is Psychologically Occurring While Multitasking

It takes your brain some time to switch between two tasks.

As a simple demonstration of the loss of efficiency of multitasking,

- Recite the letters A through J as fast as possible
 - Recite the numbers 1 through 10 as fast as possible
- Next, interweave these two tasks as fast as you can
- A, 1, B, 2, C, 3...

| First Set: Serial | Second Set: Task Switching |
|-------------------|----------------------------|
| A | A |
| B | 1 |
| C | B |
| D | 2 |
| E | C |
| F | 3 |
| G | D |
| H | 4 |
| I | E |
| J | 5 |
| 1 | F |
| 2 | 6 |
| 3 | G |
| 4 | 7 |
| 5 | H |
| 6 | 8 |
| 7 | I |
| 8 | 9 |
| 9 | J |
| 10 | 10 |

Task Switching

- (1) Ask your partner their first name
- (2) Have them perform the task switching task (A, 1, B, 2, etc.) without visually reading it.
- (3) When they are 25%-75% done, ask them one of the following questions
 - (a) What is your last name?
 - (b) What is today's date?
 - (c) What is your next class?
 - (d) What was the last thing you ate?
- (4) After they answer, ask them to continue where they left off.

Task Switching

- (1) Ask your partner their first name
- (2) Have them perform the task switching task (A, 1, B, 2, etc.) without visually reading it.
- (3) When they are 25%-75% done, ask them one of the following questions
 - (a) What is the color of your shirt?
 - (b) What time does class start?
 - (c) What is day of the week is it?
 - (d) What was the last thing you drank?
- (4) After they answer, ask them to continue where they left off.

Examples of Multitasking

You are switching between

- Driving while on the cell phone
- Walking while texting
- Calculating a bill and talking to a customer
- Having a conversation with your partner and surfing the internet
- Having a conversation with a friend while at the dog park

Potential consequences of multitasking



- People underestimated how much they switched between tasks. The average task switching as 120 times, but participants estimated they switched 14.8 times on the average ([page 96](#)).
- It is estimated 28% of traffic accidents occur when people are chatting or texting on cell phones ([page 96](#)).

Attention

Attention is difficult to divide. Your ability to do each task effectively is greatly reduced.

Implications

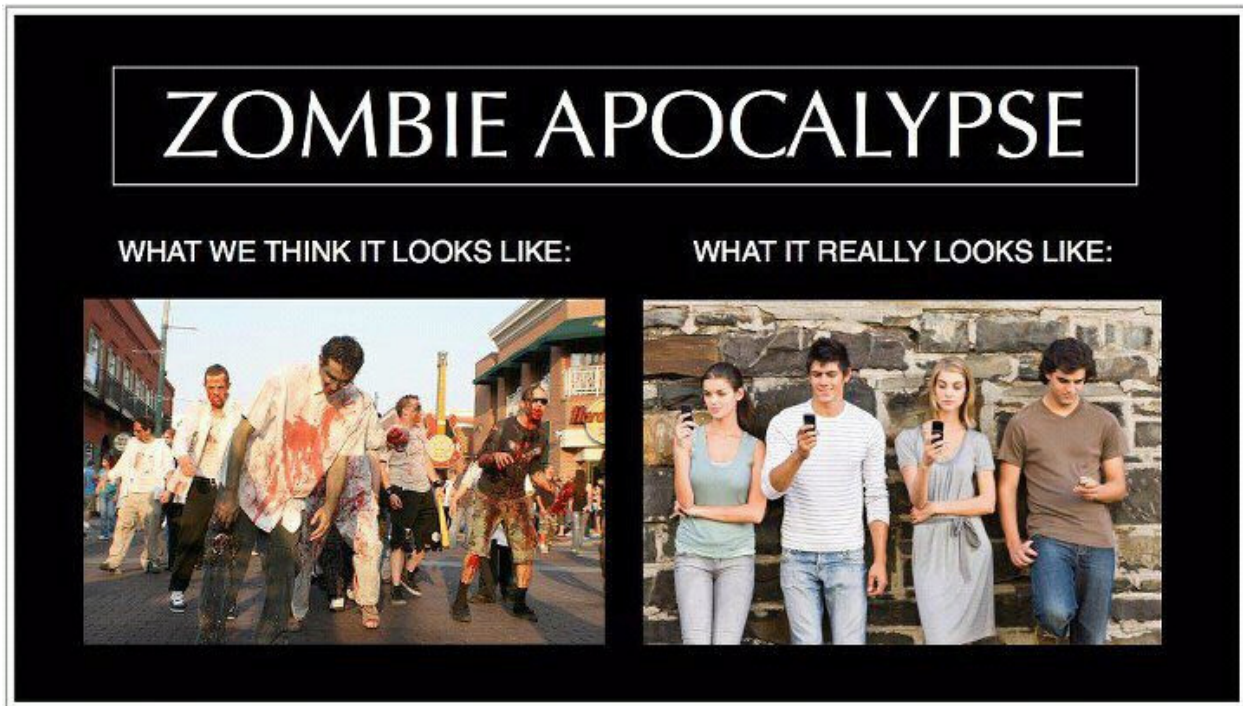
- Don't text, talk on phone while driving. There was that train commuter train crash while the engineer was texting.



Image source: NPR

- Don't text, talk on phone while in class or a meeting, you can miss something subtle. Sure, you can catch it if it is something you might be expecting, but if it isn't, you will miss it.
- As the textbook suggests, it is hard to study while watching TV or any other task. (People who are multi-tasking are doing one task in parallel, not all at once, and some people can study with the TV on as background noise, but they aren't watching it).

Attention



If you don't understand the nature of the problem, you are unlikely to recognize it, and unlikely to be able to solve the problem.

Related topics:

- Inattentional blindness
- Change blindness
- Choice blindness