



Misconceptions from the Movies - mental_floss on YouTube (Ep.3)

Misconceptions

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Hi, I'm Elliot. This is Mental Floss on YouTube. Today I'm going to talk about some misconceptions that movies taught you.

[Intro Music]

Alright, misconception number one: there's sound in space. In *Star Wars* and *Armageddon* explosions make a lot of noise, just like us on Earth would expect them to. As I'm sure you remember from high school science class though, sound is made up of waves that need to travel through something. Space on the other hand is a near vacuum, so we wouldn't hear sound when things explode. Which, in a way, is actually a lot scarier.

Misconception number two: a car door will protect you from a bullet. What would an action movie be without the protagonist using his car door as a shield while shooting at the bad guys? Well it turns out that bullets can actually go just straight through car doors. They're not great shields. That protagonist is either dead, or, like, a wizard.

Misconception number three: shooting the gas tank will make a car explode. Another car related one - yay! In *The Matrix Reloaded*, *Mission Impossible II*, and like countless other action films, a bullet will hit a car right in the gas tank, inevitably causing the car to explode. In reality, the bullet will likely just travel straight through the gas tank and out the other side of the car. I find this to be very disappointing.

Speaking of explosions, misconception number four: cigarette plus gasoline equals major explosions. Uh, sorry fans of *Zoolander*, *The Usual Suspects*, and *The Birds* but a lit cigarette isn't going to cause an explosion. In 2007, researchers at the Bureau of Alcohol, Tobacco, and Firearms tested this idea. They dropped a burning cigarette into a tray of petrol, or they sprayed petrol at a lit cigarette, two thousand times. The petrol caught on fire exactly zero times. When asked about the misrepresentation of this phenomenon in Hollywood, the leader of the study said - uh, actually they're pretty well aware of it. They don't care. Hollywood!

Misconception number five: you get an automatic 4.0 if your college roommate commits suicide. This idea was the premise of two 1998 films. There was *Dead Man on Campus* and *The Curve*. And I'm sorry to be the one to have to tell you that Mark-Paul Gosselaar fooled you once again. No college in the US has any such policy. According to Snopes, this probably just started out as a joke in like the mid-1970s, when people had really sick senses of humor. And the next thing you know, Matthew Lillard was out to get his roommate. Okay, have I dropped enough like 90s celebrities name on you? Judge Reinhold! Okay, moving on.

Misconception number six: tracing a call takes 60 seconds. I'm sure you know this trope well from movies like *Thelma & Louise* or *Catch Me If You Can*. Basically someone has to keep another person on the line for sixty seconds so that the police or the FBI can trace the call. This was the case, until like the 1980s. Now, call tracing happens immediately, even with cell phones. Because, due to a 2006 FCC order, they all must come with a way to track the phone within 100 feet. Big Brother is watching.

Misconception number seven: asteroid fields are dense with objects. According to C-3PO, "the possibility of successfully navigating an asteroid field is approximately 3,720 to 1". Actually he miscalculated those odds a little bit. In 2006, NASA sent out a space probe called New Horizons toward Pluto. New Horizons went through the Asteroid Belt, which contains a few dwarf planets as well as millions of debris bits and boulders. But, they're also far apart. According to the lead scientist for New Horizons, it had less than a 1 in a billion chance of colliding with anything. C-3PO, you so dumb.

Misconception number eight: pretty much everything about amnesia. This condition is represented in like every film about amnesia from *50 First Dates*, to the Bourne Trilogy, to Hitchcock's *Spellbound*. In many films, a character suffers from amnesia but only retrograde amnesia. Which means forgetting events that happened before the injury or incident that caused amnesia. In reality, that person would also probably have trouble learning new information as well, which they rarely do in these films. Then there are movies in which a character is bumped on the head, gets amnesia, then all it takes is another bump for their memories to magically come back to them. This happens to Kermit the Frog in *Muppets Take Manhattan*. In 2004 a study done in the US found that 42% of Americans believed that a second hit on the head could help someone with amnesia regain some memory. In reality, this does not happen at all. Don't just hit people who have amnesia guys. It's rude and ineffective. Also, frogs can't talk. Kermit can, but most frogs can't.

Misconception number nine: you can hold your breath forever. There are a lot of movies in which a character manages to hold their breath for a long time. Right, there's *Phantom Menace*, *Gravity*, *Titanic* and so on. Now it is possible to hold your breath for a really long time. For example, the current world record for holding breath underwater is 22 minutes. Okay, there's no way that guy's human. He's part fish, and that's called cheating, part fish man. And also that takes like a lot of training and breathing pure oxygen for 30 minutes beforehand. Unless your favorite characters have been practicing not breathing, they're probably like the rest of us and can only hold their breath for about 30 seconds at a time before passing out.

Misconception number ten: you get a phone call when you're arrested. In *RoboCop*, Clarence says "just give me my f'ing phone call". In real life, I wouldn't recommend saying that to a police officer. Getting a phone call after you're arrested isn't a clear right. Sometimes you're allowed one or more phone calls, but other times it's less clear. It all depends on like state laws and the situation at hand. It's a good idea however to ask to make a phone, but keep the f word out of it, okay? Also one more piece of advice, try not to get arrested.

Thank you for watching Misconceptions on Mental Floss on YouTube that is made with the help all of these lovely people. If you have a topic for an upcoming Misconceptions episode that you would like to see please leave them in the comments. Thank you again. My name is Elliot Morgan. Good bye.