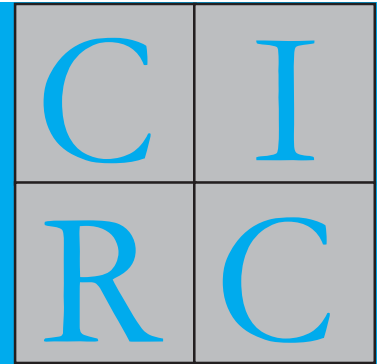


Telling Lies: Can You Read It In Their Eyes?



Source: DePaulo, B. M., Lindsay, J. J., Malone, B. E., Muhlenbruck, L., Charlton, K., & Cooper, H. (2003). *Psychological Bulletin*, 129, 74-118.

Goals:

Teach the importance of clearly defining terms.

Teach the method of proof by disproof.

Basic Idea:

How can you tell if someone is lying? Deception is often associated with physical cues that may reveal a lie. But it's not as easy as it might seem to correctly spot the hints.

Think & Write #1

What is a lie?

Have students write what they think about lies. What is a lie? How can you tell?

Gain Attention/Interest:

I doubt there are many people (other than perhaps George Washington) who never tell lies. Lies don't have to be big; they can be little ones like, "that looks really nice on you" or "your hair doesn't look that bad" or "your butt isn't too fat." Some researchers have asked people to keep a diary of their lies. They found that people average about one or two lies every day. Quite frequently people get away with lies and no one is ever the wiser. But could they be? Are some people better at telling lies than others? Is there some secret way to always know if someone isn't telling the truth? Are there tricks to telling when someone is lying?

Currently, there are several machines that can assist us in guessing whether or not someone is lying. These machines do things like keep track of heart rate, breathing rate, how much a person sweats, and even brain activity. However, today we are going to limit our discussion to the things humans can do without the aid of technology to detect lies.



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Ask: What is Science?

Obviously, we can't study lies by systematically having every person we meet tell us a lie, and then tell us what they were lying about. So, how can we learn the truth about lies? Through science.

Science answers questions or solves problems. Science can reveal the facts and the trends showing how people behave in different situations. Science works through a process called **proof by disproof**. Scientists create a

PROOF BY DISPROOF

Nonscientists seek support by gaining proof for their beliefs or hunches. Scientists seek to disprove their beliefs and hunches. If they fail to disprove an idea, then they believe they have some proof it might be true.

hypothesis (a guess) and then try different ways to prove their hypothesis wrong. If all other possible answers are shown to have flaws whatever is left is the best answer. Scientists support their answer by eliminating the incorrect ones. This is different than how a nonscientist typically approaches a problem. Nonscientists usually just check to see if their guess seems right, and don't worry about other possible answers.

1 Ask: What is Science?

2 Define the Problem: See Many Sides.

Define the Problem: See Many Sides

Before going further, we need to do something that all scientists do, yet may seem strange to you. We need to define the terms with which we are working; we need to define a lie. Defining terms is essential because without a definition, people could confuse what we mean with what they think we mean. This process is called developing a working definition. Without a definition everyone agrees upon, people might think you mean something other than what you intend. For example, think of the word "big." What is big? It depends. When you are referring to a big ship, do you use the same reference point as when you refer to a big pizza?

So, if we're going to be able to investigate lying scientifically, we need to come up with a working definition.

Think & Write #2a

Developing a working definition for a lie.

Have students write a working definition for a lie.
Does it differ from their first definition? How?

Here is a vignette that exemplifies why a clear definition of a lie is important.

Vignette

It's Friday night and Tyler is getting ready to go out to a party that he doesn't want his parents to know about. Rather than lie directly to them, he tells his little sister Gina that he is going to a friend's house to watch a movie. Gina believes him and then tells their parents that Tyler has gone to a friend's house. Did Tyler lie to Gina? To his parents? Did Gina lie to her parents? With whom should the parents be upset?

Many scientists define a lie as “a deliberate attempt to mislead others.” A non-truth that is mistakenly or unknowingly communicated would not be considered a lie. Using this definition, Gina is off the hook, but Tyler may not be so lucky.

Obviously, pretty much everyone wants to know whether or not someone is lying to them, but what particular groups of people are interested in lies as part of their daily work and personal lives? **(Solicit answers.)**

- Police officers. When they are investigating crimes and questioning suspects, they need to be able to distinguish the truth from lies.
- Criminals. If they've been caught, they likely want to figure out a way not to go to jail.
- Lawyers, Judges, and Juries. The goal of our criminal justice system is to find the truth.
- Teachers. They want to know when students are lying to them.
- Parents/Spouses/Children. It is important for family members to be able to communicate with each other and know if the truth is being told.
- Bosses and employees. People who depend on one another at work need to know whom they can believe.

Distinguish Fact From Opinion: Learn What Constitutes Scientific Evidence

Think & Write #2b

Find the physical facts.

Are there any people you know who sometimes do things that make you think they are lying? What are some typical “giveaways” of a liar?

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Fact Versus Opinion: What Constitutes Evidence?

How many of these “giveaways” do you think are specific to an individual, or group of individuals, or to a specific situation? How many do you think apply universally to (nearly) everyone? These are the differences that distinguish fact from opinion. A fact is something a police officer could use to analyze the response of anyone she/he is questioning. Do all people stumble over their words if and only if they are lying? If this were a fact, the job of a police interrogator would be much easier. However, it is not a fact. Maybe the person is just very nervous or drunk! It is the job of a scientist to discover the facts, and not just to go with a gut feeling.

Activity

Have the class form groups of 4-5 students. Have each student think of three facts about herself or himself that others in the group probably wouldn't know, with 2 being truthful and 1 being a lie. Have each person share all three statements with the group, and have the group vote on which they believe to be the lie.

Discuss as a class whether there were give-aways that revealed when people told their lie. Were there similarities among those who lied successfully? How about those who were caught?

Weigh Evidence and Make Decisions

It is important to note that lies are not always more complex than the truth. Replying to the question, “How was your day?” with “Fine” is an example of a potential easy, simple lie. Sometimes the truth is more complicated than a lie.

So how do scientists distinguish a lie from the truth? In many cases, they have people participate in experiments and ask them to lie or to tell the truth. Then, while watching them, scientists look for trends in behavior. A nonscientist might just try one method on a few people. However, a scientist relies on a multitude of different methods. These methods could include having people watch a video and judge whether a person was lying, or having people cheat at a game, or simulate a job interview in which a person either tells the truth or lies—each used on hundreds of different people—to decide. When reviewing the results they have found over the years, scientists have found many telltale signs of lies.

Physical signs of increased mental effort are frequently signs of lying. These physical changes can be things such as:

- speaking with more pauses and interruptions (such as the words “um” and “uh”)
- pupil dilation
- decreased blinking
- less eye contact
- pressing lips together more frequently
- becoming less involved in the conversation
- appearing nervous
- seeming less cooperative
- being less likely to admit a lack of memory or a mistake

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Weigh
Evidence
and
Make
Decisions.

Scientists have found that well-rehearsed lies can frequently appear “too smooth” and well-thought-out. Frequently, liars stumble over words and forget things, or need to correct themselves. Typically, liars provide fewer details and talk less. As the stakes rise, so do the cues to lies. When there is more pressure, there are more cues that may reveal a lie.

Think & Write #3

How about now?

Have students write about their thoughts now that they have learned how scientists think about lies.

Move From Science to Society

Information about lies is helpful to everyone, not just police officers, judges, and —unfortunately, criminals! Seeing someone stumbling over his words or not making eye contact does not guarantee that he is telling a lie. When present, cues to lies simply suggest that deception may be present. They do not divulge the subject of deception or whether the person simply talks like that all the time. Also, telling the truth is often hard to do, and any sign of effort should not be considered an alarm for a lie. Sometimes the truth is harder to tell than a lie. Would you ever tell your grandmother you didn’t like the meal she cooked for you? Or is it just easier to say that it was delicious?

One witness in a trial may frequently pause, stutter, and give short answers, whereas another witness arguing the opposite points may appear calm and comfortable. Which one is the liar? Can you tell just by this description? What if you knew that the witness who was calm and comfortable was a lawyer accustomed to being in a court room and speaking in front of large groups of people, but the first witness was extremely shy and had never been in a court room? Would this information influence your thoughts? Judges, juries, and lawyers are forced to make decisions such as these everyday.

People in other careers also need to know the science behind lies.

Police Officer. When they are investigating crimes and questioning suspects, they need to be able to distinguish the truth from lies. Police officers typically do not have an official education requirement, but having at least a high school diploma is typical, and usually some further education (such as an associate’s degree).

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Move
From
Science
To
Society.

Criminal. If they've been caught, they likely want to figure out a way not to go to jail, and not to give away their lies. There is no age or education requirement to be a criminal. They come in all shapes and sizes, and while there may be short-term gains, the long-term picture typically leads to a career change (such as jail).

Teacher. Teachers want to know when students are lying to them. Teachers attend four-year colleges and often obtain a master's degree as well.

Revisit, Review, Reflect, and Re-evaluate

The final word on lies and deceptive behavior has yet to be spoken. As you have likely discovered, the topic of lies is a tricky subject. Scientists are constantly revisiting the problem, reviewing past answers, and reflecting on how they can improve their methods of testing whether or not a person is lying. Rather than starting from scratch each time, scientists review the work that has already been done in search of flaws and areas that could be improved, and re-evaluate past solutions to see if they still work.

One example is the lie detector test, used widely throughout the United States. Scientists are revisiting the science behind lie detection to try to make these machines harder to fool. Some criminals have been known to be able to trick the machines, and some innocent people have been known to be identified falsely as having lied. The science behind lie detection technologies is ongoing and improving.

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Revisit,
Review,
Reflect,
and
Re-evaluate.

Think & Write #4

What's next?

Based on what they know now, have students hypothesize about what further scientific studies might be done so that scientists can better understand lying behavior.

Potential ideas: Do people become better with practice? Are some people better than others? What about people who know each other versus people who are strangers?

Discussion Questions

1. The activity involving telling two truths and a lie was done after we discussed how there can be physical cues to lies. Would it have made a difference if we had done the activity before this discussion? Why? How could we check?
2. What are some ways in which the ability to analyze lying is important that we have not discussed in class?

Homework Questions

1. Repeat the “2 truths and 1” lie exercise with a group of people who know you. Does this make it harder to lie? Does it make it easier to tell when someone is lying? What does this tell you about lying behavior?
2. In this lesson, we discussed the definition of a lie in depth. Are all lies the same? How can you define different kinds of lies? Lies could be differentiated by their significance to the liar (e.g., an important lie versus an unimportant lie). Lies could also be differentiated by whether or not they were created on the spot or ahead of time.

**Cornell Institute for
Research on Children**

Quiz Questions

Version A

1. True or false: Speaking with more pauses and interruptions is always a giveaway that the person is lying.
2. Select one of the following groups of people and explain how and why they are interested in lies as a part of their daily work or personal lives.

Police officers

Criminals

Teachers

Parents

Children

3. Select the best example of a scientific working definition for a lie.
 - a. a deliberate attempt to mislead others.
 - b. not telling the truth.
 - c. something that is not a fact.
 - d. it depends on the situation.

Quiz Questions

Version B

1. According to the lesson about telling lies, which of the following is NOT a physical sign that someone could be lying?
 - a. pupil dilation
 - b. more eye contact
 - c. becoming less involved in the conversation
 - d. appearing nervous
2. According to the lesson about telling lies, which of the following is NOT a physical sign that someone could be lying?
 - a. speaking more quickly.
 - b. seeming less cooperative.
 - c. pressing lips together more frequently.
 - d. speaking with more pauses and interruptions (such as “um”).
3. Select the best example of a scientific working definition for a lie.
 - a. a deliberate attempt to mislead others.
 - b. a successful attempt to mislead others.
 - c. a failure to distinguish a fact from an opinion.
 - d. it changes depending on the situation.

Quiz Questions

Version C

1. Write an example of a scientific working definition of a lie.

2. Select three physical signs of increased mental effort that are frequently signs of lying. If you were a judge in a court case, in addition to these signs what else would you want to observe about the person in order to determine whether she or he was telling the truth?

3. Select one of the following groups of people and explain how something we discussed in class might help members of this group in their daily work or personal lives.

Police officers
Criminals
Teachers
Parents
Children
