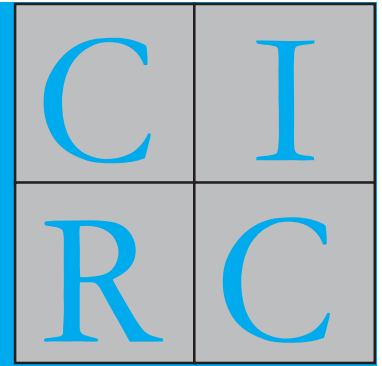


Smiles In Women Versus Men: Who Smiles More And What Does It Mean?



Source: LaFrance, M., & Hecht, M. A. (2003). The contingent smile: A meta-analysis of sex differences in smiling. *Psychological Bulletin*, 129, 305-334.

Goals:

Teach the importance of inter-rater reliability.

Teach the definition of stereotype.

Teach the definition of bias.

Basic Idea:

Smiling is something everyone does in a variety of situations. Who smiles more – women or men? Do they do it all the time, or just in certain situations?

Gain Attention/Interest:

We're going to start out with a really hard question. I know it's not always fun to start out with something difficult, but we're going to do it anyway. (**Build tension.**) Even though this is going to be a hard question, I believe that someone in here will be able to get it correct. At least I hope so. Here it is. Is everyone ready? Who here has smiled before?

It would appear that many of you smile quite frequently. This is good because smiling is the topic we are going to discuss today. Thus, you are all experts. No, we aren't going back to kindergarten to talk about what the different emotions are, and we aren't going to sit in a circle to tell everyone what makes us happy. We are going to combine two topics that are part of our daily lives, even though you might not think it so. We are going to talk about science and smiling.

Think & Write #1

Are science and smiles connected?

Have students write down their thoughts. Be sure they give support for their thinking, not just a yes or no answer.



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Ask: What is Science?

How are science and smiling related? Some high school students associate science with a frown, not a smile! But there is more to science than chemical symbols and microscopes. In general, it is the job of scientists to answer questions. However, scientists don't just sit around and think brilliant thoughts about how to answer questions — they conduct experiments to test predictions and collect evidence to support potential answers. Scientists use the method of **proof by disproof**. In addition to gathering support for their own hypotheses, or predictions, scientists use proof by disproof to help eliminate other potential answers. By showing other possible answers are wrong, scientists are gathering support for their own answers.

1 Ask: What is Science?

Scientists actively try to disprove their own ideas. This may sound crazy, but it's the best way to show that an idea works. Think of it this way: If people have tried every thinkable way to disprove an idea, yet the idea still holds, do you think it's a good one? What if people have tried only to disprove it once? Does it seem to be as strong an idea? Take sports, for example. Which do you think has the best proof that it's a strong team, a team with a 10-0 record, one with a 1-0 record, or one that has never been tested and is 0-0? Like a coach trying to show that her team is number one, scientists test their ideas as much and as hard as possible. But in science, it only takes one piece of evidence against an idea to disprove it.

2 Define the Problem: See Many Sides.

Define the Problem: See Many Sides

So what does all this have to do with smiling?

We are all members of a society, and we interact with different people in different settings. Most of us act differently depending on who we are with (e.g., family, friends, teachers, police officers). Some behaviors are appropriate at certain times, and inappropriate at others. Can you think of any? (**Solicit Responses.**)

Example: Appropriate Behavior

Yelling and cheering may be encouraged at a sporting event, but not in a library.

As many of you showed earlier when I asked the hard question, everyone smiles. But are there certain types of people who smile more? Are there certain situations when people smile more?

Activity

Ask the class to think about different groups of people who might have a reason to smile more versus less. List answers on the board. Sample groupings are: adults, kids, athletes, actors, short people, lottery winners, etc. Discuss how/why some smile more than others, and in what situations they are likely to smile more.

Some scientists recently reviewed the research comparing two very basic groups of people and their smiling behavior: males and females. Although we will be discussing the behavior differences between males and females, keep in mind the groups you just brainstormed, too.

Back to the question from earlier: Are there certain types of people who smile more? In this case, a more specific question is: Do males or females smile more?

There are several basic hypotheses that can be made to predict the answer to this question. What are some?

Examples:

- Females smile more than males.
- Males smile more than females.
- There is no difference.
- It depends on the situation.

Think & Write #2

Have students select one of the four hypotheses listed above (or they can create one of their own). Then, have them list all the support for their answer, or an example of what they could do to find support.

Many people might automatically give an answer to these questions based on their own experience. However, scientists try to give general answers that don't apply just to certain people.

Distinguish Fact From Opinion:

Learn What Constitutes Scientific Evidence

Males and females often behave similarly. It's true! If a man is hungry, what does he do? Same as a woman: He eats. If a female or male is tired, they yawn and sleep; if they're scared, they get goose bumps. But, we also know a lot of **stereotypes** about the situations in which women and men behave differently. These behaviors are what we would call gender norms, they are the expected behavior for members of a particular gender.

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Fact Versus Opinion: What Constitutes Evidence?

Alternate Activity

Ask for one female and one male volunteer to do their best impression of what they think shows a gender-based norm. For example, have each one do an impression of a "tough" guy or a "girly" girl. Do not share the "topic" of the impersonation with the rest of the class, just with the actors. You might also suggest that the students show a typical smiling situation in their impersonation. The parody points out that behavior that might appear "normal" for one gender can appear quite unusual when performed by a member of the opposite gender. This may be an inappropriate/difficult activity for some classes/students. Perform only if you believe it is appropriate and will work with the students.

BIAS

Bias is a preference for a particular outcome. Scientists try to eliminate as much bias as possible. Sports fans, for example, typically have a bias for a particular team.

Activity

Play a video of a TV show (a comedy is probably best) and have students work individually to keep track of the number of female and male smiles. The specific TV show does not matter, as long as there are numerous smiles within a relatively brief period. Have students report the number of smiles they recorded. There will likely be some variation in the number of smiles students recorded.

INTER-RATER RELIABILITY

Reliable means something is consistent from time A to time B. Inter-rater reliability means it's consistent from time to time A to time B for more than one person. Something is reliable if I can test it, you can test it, anyone can test it, and we all get the same result.

If we compare counts across students, we are looking at what scientists call **inter-rater reliability**. The closer everyone's numbers are, the higher the inter-rater reliability. Fluctuations could be attributed to many things, including not paying attention, not looking at that part of the screen, and differences in what people consider to be a smile.

If you do not have a TV available to perform this activity, you can explain the process to your students so they understand how you could test to see who smiles more.

To avoid differences in smile counts due to what people consider to be a smile, scientists develop a **working definition** of a smile. A working definition is a clear description of exactly what something consists of.

Example: Working Definition

A working definition of a “great swimmer” could be any person who makes the All-State swim team. A working definition of “funny” could be something that makes 8 out of 10 people laugh.

Can anyone give a potential working definition of a smile?

One potential answer could be both sides of the mouth turned up with the purpose of showing positive emotion.

Activity

Show another TV clip and once again ask everyone to record the number of male and female smiles. Tell everyone to use the same working definition of a smile. Again, have students report their records, and see if there is now less variation (in other words, more agreement among smile counts).

Weigh Evidence and Make Decisions

In a recent review of research on smiling behavior, scientists used a variety of methods to measure smiling behavior in numerous types of situations.

Results:

Numerous results are supplied. Don't feel obligated to share them all. Select the results most relevant to your class and your discussion.

Women smile more than men do.

People do not smile just when they are happy – they also smile when they are nervous or embarrassed.

Younger people smile more than older people.

The gender difference in smiling behavior is bigger for White people than it is for Black people.

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Weigh
Evidence
and
Make
Decisions.

The difference in smiling behavior is smaller between female and male doctors than between females and males who are not doctors.

The gender difference in smiling behavior shrinks if the participants do not know that they are being watched.

The gender difference in smiling grows when people are with strangers.

There are cultural differences in smiling behavior. For example, people from Asian countries tend to smile less than people from the United States, and the gender gap in smiling behavior is smaller in Asian countries.

What does all this mean?

A nonscientist may interpret this to mean that “all women smile more than all men”. This, however, would be an incorrect interpretation of the results. A better interpretation, or one that a scientist might make, would be that “in general, women smile more than men.” It might seem like a small matter, but making conclusions that are broader than the results is not scientific. Imagine you win a spelling bee in your class. Claiming to be the best speller in the school would not be a valid conclusion; claiming to be the best speller in your class would be a valid conclusion.

Think & Write #3

How about now?

Have students record their thoughts now that they have learned what scientists have found regarding differences in smiling behavior. Were their hypotheses correct? Do they feel the same way they did during Think & Write 2?

Move From Science to Society

What does all this mean? Does it mean that females are built to smile more? Or could it be something else? Next time you watch television or see a magazine cover at the grocery store, look at the men and women. Who is smiling more? Could how we see other people behave influence how we behave? If you don't think so, how do you explain new fads and trends? Fads start when we copy what we see others do. Twenty years ago hardly anyone wore a baseball hat backwards, now it's almost the norm.

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Move From Science To Society.

It's important to remember that seeing someone smile does not necessarily mean he or she is happy. Thus, it does not mean that females are happier than males. For example, think of an embarrassing moment you've experienced; frequently when people get embarrassed, they smile. Being embarrassed is quite a bit different than being happy.

As we consider smiling from the perspective of our society, one thing that comes to mind is advertising. Whether for a political candidate or new toothpaste, the people who write TV commercials (for example) know that they should show the candidate smiling if they want viewers to vote for her or him or buy the product. Candidates shown with a frown are not going to get the viewers' vote! Other professions are interested in smiles too.

Advertising representative. Advertisers have to pay close attention to how people look and how they behave. For example, an advertiser may have female models smile while the male models do not. Advertising representatives typically attend four-year colleges and major in advertising or marketing.

Comedian. A comedian has to know if his/her audience is enjoying the performance. Being a comedian has no educational requirements, but it often takes many years of experience to develop comedic skills.

Research assistant. Research assistants work in laboratories, colleges, and universities. They collect information from books and from questionnaires they give to people, as well as from direct observation. Research assistants attend four-year colleges and often spend time in graduate school afterwards.

Research Psychologist. Research psychologists conduct research and study the brain and behavior. They attend four-year colleges and earn a graduate degree.

Revisit, Review, Reflect, and Re-evaluate

So now we know all there is to know about smiling behavior, right? Wrong. Scientists never think they have all the answers. They constantly revisit questions that have been answered many times. They do this to reflect on previous findings to make sure they are still applicable today. For example, a hundred years ago, women did not have as much to smile about as they do today — they couldn't even vote! Because the world around us is constantly changing, reviewing previous results and adapting them to today's world is an ongoing process called re-evaluating. And it takes the process of thinking like a scientist to ensure that science is carried out correctly.

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Revisit,
Review,
Reflect,
and
Re-evaluate.

Think & Write #4

How about now?

Based on what they know now, have students hypothesize about further scientific studies that might be done so that scientists can better understand the relationship between gender and smiling behavior.

Discussion Questions

1. Is knowing the difference between the genders important? Why?
2. How might specific situations influence how each gender behaves? When you think about this question, do you use any stereotypes?
3. Come up with a list of other stereotypes that people use. Where do you think they came from? How accurate are they?

Homework Questions

1. Find an example of an advertisement that shows bias. How might a non-biased source have evaluated the situation?
2. Flip through a magazine looking at the advertisements. Who smiles more in the ads, men or women? Why do you think that is?

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Quiz Questions

Version A

1. Give an example of a hypothesis about gender and smiling behavior.

2. What is a working definition?

3. How do scientists and nonscientists differ in how they approach a question?

Quiz Questions

Version B

1. How could you design a study to determine whether women or men smile more?

2. What is inter-rater reliability?

3. You want to compare smiling behavior between men and women in magazine advertisements. What should you do?

Quiz Questions

Version C

1. How could you design a study to determine whether women or men smile more?

2. Why is inter-rater reliability important?

3. How can the findings of a gender and smiling study be applied to the real world?
