

## ***Understanding Bias***

### **Read the following report:**

Pigeons are dirtier than you think. They eat trash and leave their droppings wherever they go. Pigeons also carry diseases. One time, I was bitten by a pigeon when I tried to shoo it away. I had to get a shot because the pigeon might have given me a disease.

Can you tell how this writer feels about pigeons? Do you wonder if this is the whole story about pigeons? Does the writer say anything positive about pigeons? For instance, he or she could have mentioned that pigeons are very successful at living around people. It appears that the writer has a strong opinion about pigeons and that facts may not change that opinion.

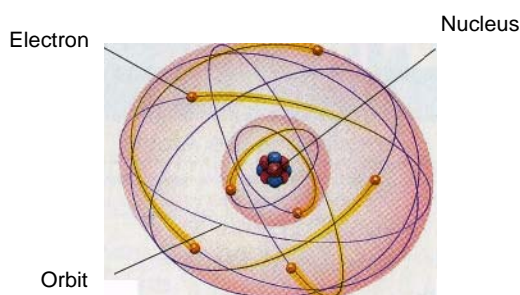
### **What Is Bias?**

One kind of bias is a strong opinion about something. You can be biased in favor of something or biased against it. In either case, you may have some facts to support your position, but a bias is based more on feelings and opinions than on facts. In some cases, bias results from a person's past experiences. That may be what happened to the student who was bitten by the pigeon.

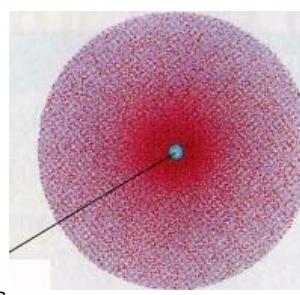
### **Bias Can Be Intentional or Unintentional**

Sometimes people use bias on purpose. For example, if you want to persuade someone, you present facts that support your position while leaving out points that don't. If you want your parents to order pizza for dinner, you might remind them that they wouldn't have to cook. However, you probably wouldn't mention that healthier, less expensive dinner options might be available.

Another kind of bias is unintentional. It occurs when a person tries to be accurate but does not have complete information. For example, scientists used to think atoms looked like little solar systems. As more information about atoms was discovered, scientists realized their description of atomic structure was wrong. They changed their theories and models based on new information.



**Bohr model**



**Bohr model**

The left illustration is an early model of an atom with defined paths for electrons. The right illustration is a later model showing a region where electrons are likely to be.

Look out for both kinds of bias. In the pigeon example, we get the feeling that the report is not accurate because most of us know from personal experience that pigeons are usually not vicious. In the example about the structure of atoms, though, it is more difficult to detect bias. We have to depend on experts for information about atomic structure. If the experts have incomplete or inaccurate information, that is what we get, even if there is no intent to give wrong information.

## Detecting Bias

Three of the many possible sources of bias are listed below. Try matching these sources with the paragraphs that follow. There may be more than one answer.

- A. The writer has received incomplete information.**
- B. The writer is trying to influence or convince the reader.**
- C. The writer's past experience is influencing his or her thinking.**

1. The pollution in our river is caused by the big factory upstream. The people who own the factory are only interested in making money. They don't care about the environment at all. I heard about them from my friend Barry, and he knows what he's talking about.

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2. Every morning, my grandfather's rooster crows when it is still dark. About five minutes later, the sun comes up. I don't know how it works, but my grandfather's rooster is responsible for the sunrise!

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3. On the Internet, I learned about a place where aliens have secretly landed a spaceship on Earth. They're going to take over the world, and when they do, they'll put all of the redheaded people like me in charge. You'd better be nice to me!

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4. Our new science textbook will be terrific! I have used other textbooks by the same company, and they are always well-written and accurate. One of the teachers at our school says this is the best textbook she's ever used.

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