

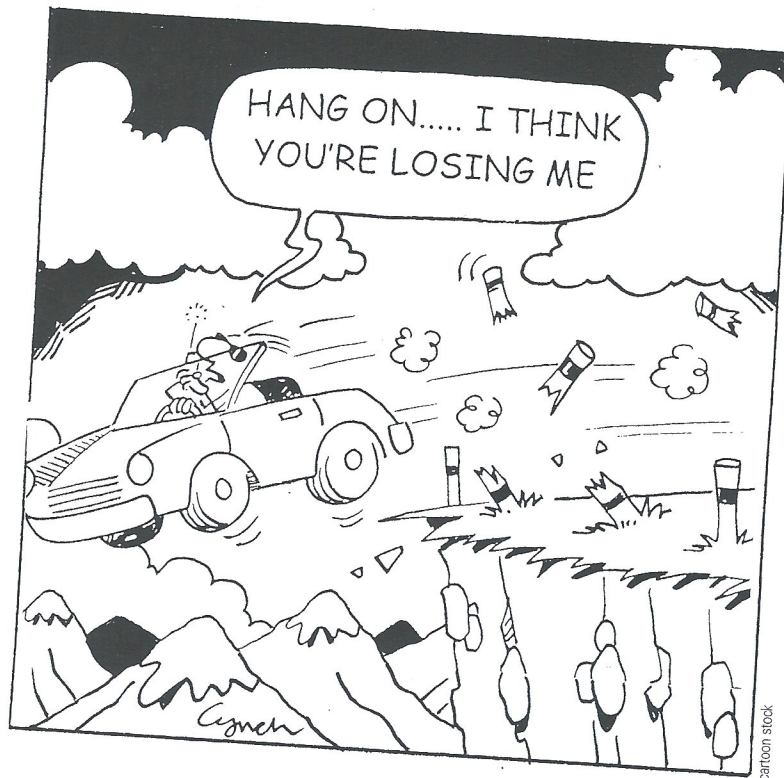
Chapter 4

Inferences: What Follows?



Baldwin, Mike

The fortune teller knows the value of her inferences, a word that includes guessing, imagining, having impressions, and hunches. How inferences interact with facts is a complex and hazardous process. When you finish studying this chapter, you will understand how thinking improves when more conscious attention is given to inferences.



DISCOVERY EXERCISES

Recognizing Inferential Thinking

Study the cartoons on the preceding pages. What kind of thinking is going on in the cartoons? How does the humor relate to this kind of thinking?

Defining *Infer*

After consulting a dictionary, write down your own definitions of the following words:

1. Reason; Conclude; Guess; Explain; Imagine; Infer; Interpret; Speculate.



“I remember when you used to look for answers using your astute powers of deduction.”

Understanding the Words *Infer* and *Inference*

When we infer, we imagine, reason, guess, surmise, speculate, estimate, predict, and conclude.

Infer The word *infer* comes from the Latin root *inferre*, meaning to bring in or to carry. When we infer, we bring in imagination to form a bridge between what we know and don't know. We make guesses. We connect the dots.

We use inferences every hour of our lives in all its forms of imagining, guessing, estimating, predicting, and reasoning. Inferences govern our simplest actions. If we see dark clouds, we infer it's going to rain. If a policeman scowls at us, we infer we are in trouble. We devise more complex chains of inferences in order to make decisions such as what products to buy, apartments to rent, jobs to take, people to trust. Sometimes we connect the dots correctly, and sometimes we don't. The following two discovery exercises are designed to make this inference-making process more aware and conscious.

DISCOVERY EXERCISES

Drawing Inferences from Observations

Read the following scenarios and think of three inferences you could make to explain each situation:

1. Your neighbors have regular habits and spend a lot of time at home. One day you notice that no lights have appeared in their house in the evenings for at least a week.
2. In an airport waiting room, you sit down next to a nun wearing a dark blue dress, starched white collar, and starched white headdress. You notice she is reading *Playboy* magazine.
3. Your child, age four, usually has a good appetite. However, she says no this morning to everything you offer her to eat.
4. You are on a Greyhound bus. A man gets on and sits beside you. He is carrying an expensive briefcase, although he is shabbily dressed, unshaven, and perspiring heavily. When you suggest he place his briefcase on the rack overhead, he refuses, saying he doesn't mind holding it in his lap.
5. You are looking in your wife's closet for your missing shoe, and you notice a new and expensive man's sports jacket hanging there.
6. After a class you go to see your professor about an error in addition on your test score. You explain to him respectfully that 100 minus 18 is 82, not 79. He tells you to get the hell out of his office.
7. You are driving through a valley on a spring morning in a heavy rainstorm. You are on a two-lane highway, and you notice that only about half the cars that pass you head-on have their lights on.

Thus *Silent Spring* provided inferences to explain the silence; inferences based on evidence as to its cause, evidence that proved accurate. Rachel Carson needed both courage and fortitude to endure for the years it took for her to write the book while coping with major health problems. In addition, upon its publication in 1962, she was attacked and called an alarmist, extremist, and hysteric. Nevertheless, before she died in 1964, the popularity of her book enlisted extraordinary grassroots, media, and eventually congressional support. The agricultural use of DDT was banned in 1972.

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Writing and Class Activity

1. Do an online search to learn more about the life and career of Rachel Carson.
2. As you review “Habits of a Critical Thinker” on page 10, what traits did she exemplify?

Distinguishing Inferences from Facts

Good writing clearly distinguishes inferences from facts, description from interpretation.

Inferences are very often confused with facts, as you may well have discovered from doing the Discovery Exercise on the mythical Johnson family in the Introduction.

Moreover, as you learned when you described a photograph in the last chapter, the challenge of descriptive writing is to give the factual details, not just your inferences about them. Usually, we find specific details in what is most conspicuous; indeed, they can be so obvious that we do not even realize we are seeing them. The best descriptive reports include these details.

To review the difference between statements of fact and inferences, suppose three people were asked to describe this photograph. Imagine this is all they had to say:

- This is a picture of two homeless men.
- These are two protesters taking a nap.
- These are two students locked out of their dorm.

Although each might assume their inference was correct, none explained what details led to their conclusion. Sometimes specifics are ignored because they may seem *too obvious*, yet this is exactly where the facts lie.



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When we describe, we need to talk about the obvious; we can't assume that others see exactly what we do.

The practice of stating the obvious also helps us draw sounder inferences. When we go back to look for the evidence behind our first impression, we may discover we made a hasty conclusion. What we want are conclusions that the evidence best supports. Yet our minds prefer to rush to generalizations.

Thus, descriptive writing can become a discipline that stretches our capacities. It requires slowing down. Nevertheless, the results are worth the effort, for descriptive writing that gives the concreteness and specificity of precise details also makes the most alive and *interesting* writing.

READING

New Dog in Town

Christopher Ketcham

Christopher Ketcham's writing shows us how a description of the mundane can include the bizarre. Notice how he plays with your expectations and feelings in this piece. Ketcham is a nature writer who was born and raised in Brooklyn. This is a short excerpt from a longer article published in Orion Magazine in 2010.



Corbis / SuperStock

How Inferences Can Go Right and Wrong

We develop inferences to help us fill in for missing facts and make sense of the facts we have. Moreover, we have to keep checking them against our facts; otherwise we could build one faulty inference on top of another.

We solve problems by asking questions, gathering facts, making inferences from them, and then letting these inferences suggest strategies for finding new facts, which in turn lead to new inferences. Each inference directs us toward our objective. When we use inferences consciously and imaginatively, they give us the certainties we need to move forward. Inferences are *essential* mental operations in the search for knowledge. But we have to learn how to make them soundly. The greatest difficulties occur when inferences are confused with facts or acted upon as though they were facts. Inferences used with conscious skill lead us to knowledge. When used without conscious awareness, they lead us to confusion and illusion.

Let us now consider contrasting examples of how inferences can create either knowledge or confusion. Let's begin with a reading selection showing the thinking of that master of skillful inference, Sherlock Holmes.

READING

The Adventure of the Speckled Band (1892)

Sir Arthur Conan Doyle (1859–1930)

“Good-morning, madam,” said Holmes cheerily. “My name is Sherlock Holmes. This is my intimate friend and associate, Dr. Watson, before

whom you can speak as freely as before myself. Ha! I am glad to see that Mrs. Hudson has had the good sense to light the fire. Pray draw up to it, and I shall order you a cup of hot coffee, for I observe that you are shivering."

"It is not cold which makes me shiver," said the woman in a low voice, changing her seat as requested.

"What, then?"

"It is fear, Mr. Holmes. It is terror." She raised her veil as she spoke, and we could see that she was indeed in a pitiable state of agitation, her face all drawn and gray, with restless frightened eyes, like those of some hunted animal. Her features and figure were those of a woman of thirty, but her hair was shot with premature gray, and her expression was weary and haggard. Sherlock Holmes ran her over with one of his quick, all-comprehensive glances.

- 5 "You must not fear," said he soothingly, bending forward and patting her forearm. "We shall soon set matters right, I have no doubt. You have come in by train this morning, I see."

"You know me, then?"

"No, but I observe the second half of a return ticket in the palm of your left glove. You must have started early, and yet you had a good drive in a dog-cart, along heavy roads, before you reached the station."

The lady gave a violent start and stared in bewilderment at my companion.

"There is no mystery, my dear madam," said he, smiling. "The left arm of your jacket is spattered with mud in no less than seven places. The marks are perfectly fresh. There is no vehicle save a dog-cart which throws up mud in that way, and then only when you sit on the left-hand side of the driver."

- 10 "Whatever your reasons may be, you are perfectly correct," said she. "I started from home before six, reached Leatherhead at twenty past, and came in by the first train to Waterloo. Sir, I can stand this strain no longer; I . . ."

Excerpt from Sir Arthur Conan Doyle, "The Adventure of the Speckled Band," 1892.



Study/Writing/Discussion Questions

1. In this short excerpt, what three inferences does Sherlock Holmes make about the visiting lady? Are all three correct?
2. On what observations (clues) does he base these inferences?
3. Describe a situation in which one of the following individuals would need to make skillful inferences:

a. A physician	d. A cook
b. A salesperson	e. An antique appraiser
c. A car mechanic	

The fascination that Holmes holds for us lies in his uncanny ability to draw correct inferences. He is a fictional hero, not of physical but of mental prowess. His appeal endures because we all know that wrong inferences can hurt us, whereas correct inferences give us power, vision, and speed. The danger is that even one faulty inference can get us into trouble. Moreover, we can build a wobbly leaning tower of inferences on the foundation of one mistaken one. Let's look at a simple example of how two different people confronted this challenge.

CUSTOMER 1

Standing in line while waiting to pay for some small items in a computer store, I see a man pick up a laptop computer on display and carry it out the door.

Chain of inferences

1. He is a thief.
2. He should be caught.
3. I must tell the cashier.
4. He will go after the man or call the police.

New chain of inferences

1. If he is caught, I will be thanked.
2. I might get a reward if I caught him.

Next chain of inferences

1. I will go out and make a citizen's arrest.
2. He might be armed and shoot me.
3. Come to think of it, the cashier, who didn't notice anything, could be an accomplice.

Conclusion

I had better not say anything.

CUSTOMER 2

Standing in line while waiting to pay for some small items in a computer store, I see a man pick up a laptop computer on display and carry it out the door.

Chain of inferences

1. He could be a thief.
2. He could have already paid.
3. It could be his own computer that he brought in for repairs.
4. He could be the owner of the store.

Conclusion

I will quietly tell the cashier since he will know enough to decide what to do.



Nancy Rica Schiffl/SuperStock

Class Discussion

1. Why do the inferences of these two customers go in such different directions?
2. Give an example of a time when you jumped to a conclusion or made a wrong and hasty inference, then went way off course by continuing to reason from this wrong inference?

Drawing Inferences from Careful Observation

Though we may not have all the facts about a photograph, we can learn a lot by recording the details we can observe and by drawing careful inferences from them. Since it is easier to show than describe how this is done, we'll examine how one person used observation and inference to describe the photo on page 119. As you read the description, notice these features:

1. The facts appear first, followed by the inferences that can reasonably be drawn from them.
2. More than one inference can be drawn from each set of facts.
3. The factual information groups together the details of one segment or feature of the photograph at a time.
4. The conclusion draws together the facts and the possible inferences into a plausible explanation of the message, purpose, and meaning of the photograph.