

# The Thinking Toolbox

Thirty-Five Lessons  
That Will Build Your  
Reasoning Skills

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July 2005

CHRISTIAN LOGIC

The Thinking Toolbox  
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Library of Congress Control Number: 2005901223  
ISBN 0-9745315-1-0

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Muscatine, Iowa 52761  
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“...Thou shalt not steal,...Thou shalt love thy neighbour as thyself.” – Romans 13:9 “Thou shalt not muzzle the ox that treadeth out the corn. And, The labourer is worthy of his reward.” – 1 Timothy 5:18

# Contents

## 1 Introduction

How to Use This Book . . . . .	10
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## 2 Tools for Thinking

1	A Thinking Tool . . . . .	14
2	A Discussion, a Disagreement, an Argument, and a Fight. . . . .	20
3	When It Is Dumb to Argue . . . . .	26
4	Fact, Inference, or Opinion . . . . .	30
5	Finding the Premises and Conclusion. . . . .	37
6	How to List Reasons Why You Believe Something . . . . .	42
7	How to Defeat Your Own Argument . . . . .	49
8	When Not to Use Logic . . . . .	54

## 3 Tools for Opposing Viewpoints

9	Using the Opposing Viewpoints Chart. . . . .	62
10	Opposing Viewpoints Are Everywhere. . . . .	67
11	The Good, the Bad, and the Ugly Evidence . . . . .	72
12	You Can't Believe Everything You Hear. . . . .	76
13	Are You Primary or Secondary? . . . . .	81
14	Who Has a Reason to Lie? . . . . .	86
15	Corroborating Evidence . . . . .	92

16	Mystery of the Stolen Manoot . . . . .	97
17	Stir Plot until Thickened. . . . .	100
18	Gunfight at the O.K. Corral. . . . .	104
19	Does a Possibly Make a Probably? . . . . .	110
20	Circumstantial Evidence. . . . .	116
21	Puzzling Developments. . . . .	121

## **4 Tools for Science**

22	Mole the Scientist . . . . .	126
23	Tools that Help Scientists Do Their Job . . . . .	133
24	How to Be a Keen Observer . . . . .	138
25	Brainstorming . . . . .	148
26	Hypothesis Is a Huge Word . . . . .	154
27	How to Prove You Are Wrong . . . . .	158
28	A Good Experiment . . . . .	164
29	How to Analyze Data . . . . .	173
30	Listen and Learn. . . . .	181
31	Pseudoscience . . . . .	186
32	A Little Project . . . . .	191

## **5 Projects**

33	Projects . . . . .	198
34	“Herbal the Verbal Gerbil” Game. . . . .	201
35	The Mystery of the Large Letter Library . . . . .	202

## **6 Answer Key . . . . . 209**

# Lesson 12

## You Can't Believe Everything You Hear

**A** source is any place we get information about something. Books, newspapers, movies, the person next to you on the bus, and the label on your mattress can all be sources of information.

When looking at sources, you will quickly realize that while some sources can be trusted, others cannot.

MAN ON INTERNET DISCUSSION BOARD: Did you know that the Queen of England doesn't need a driver's license to drive? She drives around all the time in her Range Rover without one.

This is quite an interesting thought. Why would the Queen of England not need a driver's license when everybody else does? But before we get carried away and start believing this, we need to ask a question.

us: How do you know that?

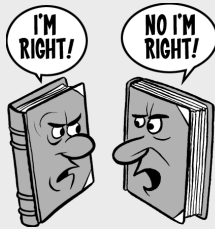
We shouldn't accept the claim of somebody on a discussion board just because he is saying something interesting or because we could imagine how it might be true – *anything* can be on a discussion board. We need to find out *how* he knows what he is saying is true. How do we know this man on the discussion board actually knows anything about the Queen of England?

MAN ON DISCUSSION BOARD: Uh, somebody told me about it. I think he read it on a Web site.

So, this man heard it from somebody else, who read it on an unknown

Web site. Should we trust him? Should we tell our friends that the Queen of England drives around without a license? Probably not. When sources tell us things, we need to be able to analyze them so that we can judge whether they are reliable.

There are rules for analyzing sources.



### **A Rule for Analyzing Sources:**

**If you don't know how a source obtained his information - how he knows what he knows - then the source should be considered unreliable.**

When someone tells us something (like claiming that the queen doesn't need a driver's license), we should keep asking "Where did you hear that?" until we find out where that person obtained his information. If he cannot or will not tell us where he obtained his information, then all we have is that person's claim, and we should consider the information unreliable.

So, does the Queen of England need a driver's license to drive? We need to do a little research.

WWW.STRANGETHINGSABOUTFAMOUSPEOPLETHATYOUPROBABLYDONTKNOW-ABOUT.COM: One strange fact about Queen Elizabeth is that she doesn't need a driver's license to drive. In fact, she drives around all the time in her Range Rover. It even says so on the Royal Web site: "The queen doesn't need a driver's license to drive." Also, our reporter in England, Reginald Williams, said: "I've seen her drive in her Range Rover on several occasions."



This Web site seems as if it may be a slightly more credible source. However, we have not verified *this* Web site’s source of information. We need to make sure the Web site’s source says what it claims. It says the information came from the Royal Web site. We should check up on this as well.

[WWW.ROYALBUCKINGHAMPALACEWEBSITE.UK](http://WWW.ROYALBUCKINGHAMPALACEWEBSITE.UK): The Queen of England does not need a driver’s license to drive.

[www.royal Buckinghampalacewebsite.uk](http://www.royal Buckinghampalacewebsite.uk) is probably a reliable source saying that the queen could drive a vehicle without a license *if she wants to*. It would know, and would probably have no reason to invent the idea. But the Royal Web site does not say that she actually *does* drive. When we check on sources we shouldn’t assume things.

We could contact Reginald Williams from [www.strangethingsaboutfamouspeoplethatyouprobablydontknowabout.com](http://www.strangethingsaboutfamouspeoplethatyouprobablydontknowabout.com) to find out if he actually did see the Queen driving around in a Range Rover.

But if we *really* wanted to know for sure, we could always go ourselves.

Late one night, you sneak into the Buckingham palace garage. You find a Range Rover parked there. It has a license plate that says “Warning: Queen in driver’s seat.” You hide in a garbage can. Early the next morning a lady walks in holding a handbag and wearing a crown. She gets in the driver’s seat and drives away.

## Exercises

A. 1. What is the first rule for analyzing sources?

B. In the following quotes, would you believe what the speaker is saying?

2. SALESMAN: For \$87.98 this “Comfor-Zone” pillow will help you get a good night’s sleep. You can take it from me, it works!
3. BUCKINGHAM PALACE GUARD: Ma’am, I would suggest that you do not enter this area, as it is a restricted zone and I will have to shoot you if you do.
4. MAN IN CROWDED PARKING LOT: Ma’am, are you having trouble finding a parking spot? You can leave the car with me and I’ll park it for you. I’ll bring it back to you when you need it, I promise.
5. GESTAPO AGENT: Your friend André has told us everyting, so you see it is pointless for you not to cooperate. All vee need from you is to confirm some minor facts zat vee know already. Tell us ze names of ze people in your resistance group.
6. *Encyclopedia Britannica*: The Tasmanian devil is a mammal of the marsupial family Dasyuridae, with a stocky body and large squarish head. The Tasmanian devil is 20 to 31 inches long. It has large jaws and strong teeth, and is named for its devilish expression, husky snarl, and often-bad temper.
7. If you wanted to know what the American Declaration of Independence said, which source would be more reliable?
  - a. An American history book.
  - b. The Declaration of Independence.

C. Decide whether the following e-mails should be forwarded. If you wanted to check up on these sources to find out if they were true, where would you go?

8. BILL GATES GIVES AWAY FORTUNE: Did you know that Bill Gates is giving away his massive fortune to anybody who wants to forward this



e-mail to their subscriber list? Yes, that's right, Bill Gates pledges to give you one hundred dollars for each person you forward this e-mail to. Why is he doing this? He says he is deeply grateful to all the people who have made him successful, and wants to give a little of his success back to his customers. All you have to do is send him the address you forwarded this to (so he can check if they are legitimate) and he will send you a check in the mail. Imagine, if you have only twenty people on your e-mail list you can make \$2,000! But you don't have to take our word for it. The Microsoft Web site has confirmed this e-mail, saying it is legitimate, go there to check it out. So, forward this e-mail. . . hey, it couldn't hurt!

9. **BOYCOTT KFC:** During a recent study of KFC done at the University of New Hampshire, they found some very upsetting facts. First of all, has anybody noticed that just recently the company has changed its name? Kentucky Fried Chicken has become KFC. Does anybody know why? The reason is because they cannot use the word chicken anymore. Why? KFC does not use real chickens. They actually use genetically manipulated organisms. These so-called "chickens" are kept alive by tubes inserted into their bodies to pump blood and nutrients throughout their structure. They have no beaks, no feathers, and no feet. Their bone structure is dramatically shrunk to get more meat out of them. This is great for KFC because there is no more plucking of the feathers or the removal of the beaks and feet. The government has told them to change all of their menus so they do not say "chicken" anywhere. If you look closely you will notice this. Please forward this message to as many people as you can. Together we can make KFC start using real chicken again.
10. Find out on the Internet, or anywhere you choose, if the Queen of England drives without a driver's license. (By the way, the Web sites listed in this lesson do not exist.)

# Lesson 13

## Are You Primary or Secondary?

**A** primary source is an eyewitness, somebody who saw an event with his own eyes or heard it with his own ears.



*A primary source is somebody who was there.*

GREAT GREAT GRANDPA: Yep. I saw it with my own two eyes. I was young back in those days, 'bout fifteen. I was standin' back of the barn when I sees young Georgie – that's what we called him then – come round the corner with a hatchet. Then he commences hackin' away on that cherry tree. I don't know why he did it, didn't seem like his pa would care for him choppin' down the cherry tree. But he continues a hackin', smilin' all the while, till the little tree falls. Yep, I saw it happen all right.'

Great Great Grandpa is a primary source for what happened when the

young George chopped down a cherry tree – he was there and actually *saw* the event himself.

If Great Great Grandpa didn't see the cherry tree chopped down himself, but heard about it from somebody else, he would be a *secondary source*.

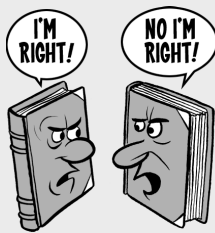
*A secondary source is not an eyewitness, but is someone who heard the story from somebody else.*

PA: Yes, son, my great great grandpa told me all about what happened. Little George was there in front of his dad, when his dad says to him: "Son, do you know anything about my cherry tree out behind the barn? It seems somebody has chopped it down." Then George pipes up: "Father, I cannot tell a lie; I chopped down that cherry tree." "Okay, son," his father says, "go to the woodshed out back and cut for me a large switch. Your honesty surely won't save you from a thrashing."

Because he hadn't been born yet, Pa didn't actually see the scene he describes. However, he did hear about it from somebody else. Pa is a secondary source.

When we study history, there are many sources which tell us what happened at a particular event. Some of these sources are primary sources, and some of them are secondary sources.

When we read a history book, we often read an account written by somebody who was not there. The authors of history books will research an event, read about what happened, then write about it in their own words. It might come as a shock to you, but the things you read in a history book aren't necessarily true. They are often the author's interpretations of an event. This brings us to our second rule for analyzing sources.



### **Rule for Primary and Secondary Sources:**

**A primary source is generally more reliable than a secondary source because a story can change as it passes from one person to the next.**

Historians believe that a primary source, who actually witnessed the event, is usually more accurate than a secondary source, who only heard it recounted. This is because each time somebody passes on a story to the next person, he might add a little bit to it.

SON: George Washington was this really cool guy. My pa told me all about him. He said when George was seventeen years old, his dad gave him an axe that was seven feet long and weighed forty-two pounds. George chopped down twenty cherry trees with it, then told his dad. His dad got real mad at him and grounded him for a week.

This isn't exactly what his pa told him. This son is adding a few things to his father's story to make it more interesting.

This doesn't mean history books aren't useful to read. We should read a history book when we want to get an overview of what happened during an event. Sometimes watching a movie about an event may be a good idea. If the movie is good, it might get us excited about the event and the time period it is set in. We might go to the library and look up what really happened. However, when watching movies such as *Gone with the Wind* or *The Great Escape*, we have to be cautious. Movie makers want their movies to be dramatic and entertaining. They might make events in the past look more exciting than they really were.

Gossips – people who like to spread news about other people – are almost always secondary sources, because they usually repeat to others what they heard from cousin Nessie, who heard it from Ralph's sister, Margaret, who

heard it from . . .

## Exercises

- A. 1. What is the rule for primary and secondary sources?
- B. Say whether each of the following examples is a primary or a secondary source.
2. **HISTORY BOOK:** In the area west of the Mississippi from the period 1870-1892, often referred to as the “wild west,” nearly everybody wore a gun – except Quakers and heroines. Saloons were often the scene of rough fist-fights. Men, often intoxicated, would throw other men through saloon windows or through swinging doors. Due to mislabeled shipments of balsa wood to the American west, chairs were also built to a much lower tolerance. During this period, black was the most popular color for hats, if you were a villain. Heroes most often wore white.
  3. “After we jumped into the water, it was every man for himself. I waded parallel to the beach with my squad because the heavy fire was directed towards the boats. As I was going straight towards the beach, I saw Lieutenant Hilscher go down on his knees as a shell exploded. He fell into the hole caused by the explosion. He died there on the beach. . . . When I finally reached the edge of the water, I started to run towards the seawall under a deafening roar of explosions and bullets. I saw a hole about seventy-five feet away, so I ran and jumped in, landing on top of O. T. Grimes.” – Sergeant Warner Hamlett on D-Day, 1944.
  4. “Yes, sir. I was there. Leastways, my son was. Butch Cassidy came into the bank and said to the teller, “Hand over all the money, and nobody gets hurt.” He had a bag in his hands and the teller commenced to fillin’ it with bills. When he was done, Butch strolls out the door real cool-like. That man sure could rob a bank.”
  5. “Here it comes, ladies and gentlemen, and what a sight it is, a thrilling one, a marvelous sight. The sun is striking the windows of the observation deck on the westward side and sparkling like glittering jewels on the background of black velvet. Passengers are looking out the windows

waving. The ship is standing still now. The vast motors are just holding it, just enough to keep from. . . . It's broken into flames! It's flashing . . . flashing! It's flashing terrible . . . oh, oh, oh! . . . It's burst into flames! . . . Oh my, this is terrible, oh my, get out of the way please! It is burning, bursting into flames and is falling. . . . Oh! This is one of the worst catastrophes in the world! Oh! It's a terrible sight. . . . Oh! and the humanity and all the passengers! I told you, it's a mass of smoking wreckage. Honest, I can hardly breathe. I'm going to step inside [the hangar] where I can't see it. . . . It's terrible. I – I – folks, I'm going to have to stop for a moment because I've lost my voice. This is the worst thing I've ever witnessed." – Herbert Morrison, reporter for Chicago radio station WLS, describing the crash of the *Hindenburg* (May 6, 1937)

6. PROSECUTING ATTORNEY: Can you tell me what happened on the night in question, ma'am?  
MISS HOUSEMEN: Yes, I can. I was standing on the street corner when that man right there went into the bank. He had a gun in one hand and an empty bag in the other. A minute later I saw him coming out. He still had the gun, and the bag was full of money.
7. "About sixty-five million years ago a meteor about two miles wide struck the earth. The meteor's impact, followed by extended darkness from dust and debris thrown into the atmosphere, followed by more climate changes, weakened the last remaining dinosaurs to the point of extinction."
8. SAM: Did you know that the movie *The Great Escape* is a true story? I watched it last night. In it, Big X escapes from a German prisoner-of-war camp and then gets recaptured by the Gestapo.
9. *Encyclopedia Britannica*: The cheetah is a tawny-coated, black-spotted cat native to Africa and Southwest Asia, the fastest land animal, capable of running at speeds of up to seventy miles per hour.



# Answer Key

- not loyal; in fact, they often turn on their masters.
3. Answers will vary. Possible answer: Monarchy is a better form of government than democracy.
  4. Answers will vary. Possible answer: Henry the Eighth was the best ruler England ever had.
  5. Scientist Sedgwick
  6. Bert. He isn't disagreeing with the other two; he is just pointing out a different fact.
  7. Derf
  8. Enrod
  9. None. They each have a different point of view about the war. Hans disagrees with the other two by saying they shouldn't argue about it.
  10. C, d, e (this is a circular argument), g, and j.

## Lesson 11: The Good, the Bad, and the Ugly Evidence

1. C. Strong
2. C. Strong

3. None. No piece of evidence seems to stand out as strong or weak. Raymond doesn't have enough information to make a smart decision – assuming robbing a house could ever be a smart decision. Hopefully the Pringles' security measures will work.

## Lesson 12: You Can't Believe Everything You Hear

1. If you don't know how a source obtained its information – how he knows what he knows – then the source should be considered unreliable.
2. We wouldn't.
3. I would believe him if I were you.
4. We wouldn't trust him.
5. If they know the facts already, why are they asking you? We wouldn't believe them.
6. We would say this is a reliable source.
7. B.
8. We wouldn't forward this. Since this e-mail says Microsoft's Web site has confirmed it, you could



check the Microsoft Web site.

9. We wouldn't forward this. You could visit KFC's website to see if they reference chicken. You could ask the University of New Hampshire to see if they did such a study. Or you could tour the KFC packing plant.

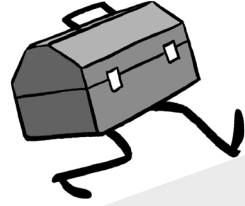
## **Lesson 13: Are You Primary or Secondary?**

1. Because a story can change as it passes from one person to the next, a primary source is generally more reliable than a secondary source.
2. Probably a secondary source.
3. Primary source.
4. Secondary source.
5. Primary source.
6. Primary source.
7. Secondary source.
8. Sam is a primary source for what happened in the movie, but not for whether the movie is a true story.
9. Probably a secondary source.

## **Lesson 14: Who Has a Reason to Lie?**

1. We should prefer the testimony of someone who does not have a reason to lie over someone who does.
2. No reason to lie.
3. Reason to lie. Bert wants to get Scotty to go to the movie.
4. No reason to lie.
5. Reason to lie. He wants to get the union behind the candidate.
6. No reason to lie.
7. Reason to lie. They sell gold themselves.
8. No reason to lie.
9. Reason to lie. He might want to become famous and be quoted in magazines.
10. Reason to lie. He sells the pills.
11. We would question this for reliability because we do not know where it is coming from.
12. No reason.
13. No reason.
14. Secondary source.
15. Reason to lie.
16. Nothing.





## Colophon

The book was designed by Nathaniel Bluedorn.  
[design.bloomingthorn.com](http://design.bloomingthorn.com)

The fonts used were Adobe Caslon Pro  
and Coop by House Industries.