ARGUING USING CRITICAL THINKING

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Table of Contents

Critical thinking is a series learned skills. In each chapter of this book you will find a variety of skills that will help you improve your thinking and argumentative ability. As you improve, you will grow into a more confident person being more in charge of your world and the decisions you make.

Acknowledgements

Nothing like this is ever done without the help of others.

I want to first thank my colleagues in Communication Studies.

Jack Sterk who first made the suggestion we team teach a class that combines persuasion, argumentation, and communication to teach how to think and argue more effectively. Our collaboration on an early version of a text for that class was the inspiration to write this book.

Josh Miller, my Department Chair, who kept pushing me to write an OER text that would really apply to the environment and arguments we are now experiencing. His persistence paid off.

All the instructors who used early drafts of this text in their class. Thank you for your comments and suggestions. All the hundreds of scholars who have explored critical thinking, persuasion and argumentation. Without their insights, this would be a small book indeed.

I want to thank my wife for her patience with my writing and her assistance in the final proofreading and evaluation of this book. There may be a mistake or two, but compared to my proofreading skills, she is stellar.

Thank you all.

CHAPTER OVERVIEW

1: Standing Up For Your Point Of View

This book is not about how to win an argument, although you will become more skilled at argumentation. This book is about how to engage in constructive conflict resolution and thus gaining more confidence in your points of view. We will do this by exploring all types of arguments from interpersonal disagreements to major policy decisions. In this process, we will work at improving your critical thinking skills at decision-making.

1.1: Arguing Can Be Constructive

Ever make a bad decision?

In September of 2000, Mark Randolph and Reed Hastings, the co-founders of Netflix met with John Antico, the CEO of Blockbuster to see if Blockbuster was interested in purchasing Netflix for $50 million dollars. They made their argument and Mr. Antico didn't even consider the offer. He actually thought it was a joke.

Netflix had been losing money and was looking at a $5 million dollar loss that year. The founders of Netflix had been trying to get a meeting with Blockbuster for months and finally they had their chance to make an argument as to why it would be in Blockbusters interest to purchase Netflix.

In his book, That Will Never Work, Marc Randolph describes the encounter.

> *Hastings quickly ran over Blockbuster's strengths and then noted that there were areas where it could benefit from Netflix's market position and expertise. "We should join forces," he said. "We will run the online part of the combined business. You will focus on the stores. We will find the synergies that come from the combination, and it will truly be a case of the whole being greater than the sum of its parts."*
>
> *Antioco's response is probably very high on his list of things-I-wish-I'd-never-said: "The dot-com hysteria is completely overblown." Blockbuster general counsel Ed Stead then explained how the business models of Netflix and just about every other online business were not sustainable and would never make money. The Netflix execs debated this point with him for a while, then Stead cut to the chase: "If we were to buy you, what were you thinking? I mean, a number."*
>
> *"Fifty million," Hastings said.*
>
> *Randolph writes that he'd been closely watching Antioco during this conversation. Throughout, the Blockbuster CEO appeared as a polished professional, leaning in and nodding and giving every indication of someone who was listening attentively. Now Randolph observed as an odd expression crossed Antioco's face, turning up the corner of his mouth. It lasted only a moment, he writes. "But as soon as I saw it, I knew what was happening: John Antioco was struggling not to laugh."* [1]

As you can guess, the offer was turned down. The result? Blockbuster filed for bankruptcy in 2010 and the last corporate Blockbuster store closed in 2014. Netflix on the other hand has been very successful with $1.2 billion net income in 2018.

The people representing Blockbuster failed to use critical thinking skills when analyzing the argument to purchase Netflix.

Most of us will never be in a position to make a major corporate decision, but we will most likely be a participant in interpersonal arguments.

Former professional football player Chad Johnson seemed to have it all going his way. He was playing football for the Miami Dolphins, he had just gotten married and he and his wife had their own reality television show. Then it all fell apart.

Evelyn Lozada, Chad's wife, confronted him about a receipt she had found for a box of condoms. The argument escalated and ended with Chad Johnson "allegedly" head- butting his wife. After being treated at the hospital, Evelyn filed for divorce.

The Miami Dolphins cut Johnson from the team and the reality television show was cancelled. To say the least, this was not what we would refer to as constructive conflict resolution. This was not how we use our critical thinking ability in an argument to resolve differences.

The goal of this text is to introduce you to your critical thinking skills that will lead you to a more positive conflict resolution strategy allowing you resolve differences with others more constructively.

Dr. Joyce Brothers recently reported that in relationships, both men and women tend to resort to tactics of manipulation in order to get their way in their important argumentative battles. But she was once quoted as saying, *"Love comes when manipulation stops; when you think more about the other person than about his or her reactions to you. When you dare to reveal yourself fully. When you dare to be vulnerable."* [2]

This book is not about how to win an argument, although you will become more skilled at argumentation. This book is about how to engage in constructive conflict resolution and thus gaining more confidence in your points of view. We will do this by exploring all types of arguments from interpersonal disagreements to major policy decisions. In this process, we will work at improving your critical thinking skills at decision-making.

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1. Randolph, Mark. *That Will Never Work.* New York: Little Brown and Company, 2019.
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1.2: Defining a Conflict

Conflict is a natural occurrence in everyday life. Try as we may, there is really no effective way of avoiding it. In fact, we should not avoid conflict. It is through the process of argument that we can begin to deal with and work out differences of opinion. In a recent survey, avoiding conflict was rated by adults,18 and over, as one of their top goals with respect to their interpersonal relationships.

1.2.1: "Divorce, separation relationship" (CC0 1.0; Tumisu via Needpix.com)

There are a number factors that can influence conflict avoidance, such as self-doubt, lack of assertiveness, inadequate communication skills, fear of rejection, disapproval, criticism, loss of security and more. In other words, people avoid conflict in order to minimize perceived threats to their self-esteem and sense of well-being.

Overcoming the fear of discomfort due to conflict is important for three primary reasons:

First, conflict avoidance often leads to emotional suppression. When we bury our emotions we always “bury them alive” which means they can fester and show up when we least expect it, often causing us and others unnecessary pain...

The second reason is that avoidance of conflict reinforces irrational fear. For example, “If I address this concern I’ll be rejected, hurt, or criticized,” or, “I’ll look foolish and feel humiliated if I speak up.” Although you can experience hurt feelings or embarrassment, the truth is they won’t destroy or devastate you like you fear they may...

The Third reason is that by avoiding conflict you miss out on opportunities for growth. Growth always involves change, and even positive changes often involve some level of tension and discomfort. To choose to avoid conflict is to choose personal stagnation – the opposite of growth. [1]

One goal of any good critical thinker should be to deal with, handle, and effectively resolve conflict.

Conflict occurs anytime there is opposition between people over ideas or interests and exists when there is a divergence of goals, objectives or expectations. Conflict can occur between individuals, groups, organizations, nations, and even within you.

I like the explanation of conflict given by the **Institute of Management and Development in Cambodia.**

- Conflict is a state of opposition, disagreement or incompatibility between two or more people or groups of people.
- Conflict is a state of opposition between persons or ideas or interests.
- Conflict is usually based upon a difference over goals objectives, or expectations between individuals or groups.
- Conflict also occurs when two or more people, or groups, compete over limited resources and/or perceived, or actual,incompatible goals.[2] (Cambodia,2017)

1.2.2: "Silhouette Couple" (CC0 1.0; Josethestoryteller via Needpix.com)

The word conflict actually derives from the Latin word '*conflictus*' which means 'strike two things together' and this seems like a realistic look at conflict. When we are in conflict there are at least two opposing outlooks that are colliding.

Conflict is everywhere. Every relationship has conflict. It exists inside us and around us. It is a natural and inevitable part of all human and social relationships. Conflict occurs at all levels of society - intra-psychic, interpersonal, intragroup, intergroup, intra-national, and international.[3]

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1.3: Types of Conflicts

There are **three** types of conflicts that involve people.

Simple Conflict

This type of conflict is focused on a specific subject or topic. The disagreement is over differences about substantive topics of a social, political, or economic nature. Various books and surveys list the following as the major areas of simple conflict in marriage that lead to over 90% of all divorces in the United States; **sex, finances, raising children, in-laws, religion**.

Pseudo Conflict

This type of conflict occurs when there is a communication breakdown between the sender and receiver. Such conflicts are created when the receiver decodes a message differently than the sender intended, when he or she encoded it. You send your special someone flowers as a symbol of love, but he or she interprets the flowers as a symbol that you are guilty of doing something wrong. You make dinner in order to give your spouse the night off; he or she interprets the message, as you don't like his or her cooking. In both cases a conflict occurs where no conflict actually exists.

Ego Conflict

This type of conflict occurs as a result of personality differences between two people. This is the most difficult type of conflict to resolve because one's dignity, or self- esteem, or self-respect, or pride is involved. In the early days of this country, pistol duels were a common way of resolving ego conflict. In 1804, Vice-President Aaron Burr shot and killed Treasury Secretary Alexander Hamilton in a duel. Burr challenged Hamilton to the duel because he was angered by several letters that Hamilton had written and published which questioned Burr's character and fitness for office. This book will not be suggesting duels to resolve any type of conflict.

1.4: Relationship Argumentation

Some couples claim that they never fight. That's next to impossible in marriages where both partners feel free to express their differences. When I hear that a couple never fights, I worry that they keep their differences to themselves and allow internal frustrations to build. Other couples have frequent arguments that sometimes get very loud. However, the volume and frequency of fights aren't very telling, nor are the issues that a couple fights about. The key idea to remember is that no two people will always see things the same way, so it is healthy for couples to argue and disagree to resolve a difference between them.

1.4.1: "Arguing Female Male" (CC0 1.0; OpenClipart-Vectors via Needpix.com)

The most important question is: Are the fights constructive? In marriage, you and your spouse have to referee your own disputes without help from a third party, so you need to hammer out rules and limits that work for you. The two of you can set flexible boundaries that suit your individual personalities and your marriage as long as you follow the rules of fair fighting.

The most common issues couples fight about are: sex, money, work, children, in-laws, religion, and housework, roughly in that order. If you find the same old issues come up over and over again, or, as soon as you've resolved one issue, something else crops up, then you haven't successfully resolved the actual source of the conflict. There are a variety of challenges that interfere with successful conflict resolution:

Unresolved issues – Sometimes couples find they're fighting battles that have far more to do with the past than the present. Without even realizing it, each person may have an issue from their past that since it has yet to be resolved, is still involved in the current argument. This could be a personal issue, popularly referred to as "one's baggage" or it could be an issue between the couple arguing that was not totally resolved in an earlier argument.

Sensitive issues – We all have subjects that are very personal. They may be personal to us or taboo in a relationship. These subjects could refer to a physical characteristic. You may not like the way you look and if your partner brings that up, the argument can be totally derailed. Or the sensitive issue might have something to do with something that happened in the relationship like a forgotten anniversary. Bringing that up in an argument about where to go on a vacation serves no purpose.

Fighting for your deeper needs - Couples often use topics such as money, sex or housework to fight for their deeper needs within a relationship. For example, an argument over who should pay for what, may really be about where the responsibility lies and who's got the power in this situation. Disagreements about housework may actually be about unfilled needs for respect and worth. When she says, "Why do I always have to do the dishes," may not be so much a disagreement about housework, but instead a frustration with who has what power in the relationship.

Hidden payoffs – For some couples, one of the beneficial outcomes in an argument is that it may be the only time you share your real feelings. We may think that to preserve a relationship we need to keep our feelings about our partner to ourselves. By expressing these feelings, you can begin to solve your differences. Not only can the arguing release these pent-up differences, but they can also lead to a closeness that is created when we make up with our partner. Look for deeper issues when the argument starts. Are you or your spouse just letting off steam? Is there something specific that you want your partner to do?

Are your angry words an expression of serious differences or conflict or just words of frustration? When I am stressed and my wife says something to me, I might just snap with a quick, unkind comment to her. When we first were together this would start an argument. Now when she hears me snapping at her, she knows something is going on with me and begins to ask, "What's the matter?"

Failure to stick to the issues – Often, since we want to win the argument, we move beyond the topic of the argument. You're more likely to get your partner to see things your way if you avoid personal attacks and concentrate on what you're trying to accomplish.

Here is an example, if you're upset because your wife is late, don't say, "You have absolutely no consideration for other people." Instead, try saying: "I feel more relaxed and have a much better time when we get to places a few minutes early. Can we do it that way next time?" Your partner is likely to respond to your needs if she doesn't feel attacked and forced to defend herself.[1]

Time Magazine: How to Win Every Argument, Eric Parker May 24, 2014

So, you want to know how to win every argument? Stop trying.

Not that passivity is the most effective strategy but if you're thinking about "winning" you're already headed down the wrong path.

From a neuroscience perspective, "When an argument starts, persuasion stops."

When an argument starts, persuasion stops. A group of researchers including psychologist Drew Westen conducted a revealing experiment, which Westen wrote about in his book The Political Brain. In the heated election campaign of 2004, the researchers found supporters of presidential candidates George Bush and John Kerry and took MRI pictures of their brains as they watched video footage of their favorite candidate completely contradicting himself. So, what happened in people's brains when they saw information that contradicted their worldview in a charged political environment? As soon as they recognized the video clips as being in conflict with their worldview, the parts of the brain that handle reason and logic went dormant. And the parts of the brain that handle hostile attacks — the fight-or-flight response — lit up.

This is what happens when a discussion becomes an argument. It's no longer an exercise in logic and reasoning. It's just a fight. And being in a fight brings its own frame of mind, a whole set of attitudes, expectations, and conditioned reactions that go along with arguing. As soon as that happens, no one cares who is right and who is wrong. All that matters is who is friend and who is foe. **So, if you're trying to win over someone whose natural allegiances are not with you, getting into an argument is a sure way to fail.**

run, it's most important that the outcome of your disagreement doesn't leave one of you feeling like a loser. If you yield on an issue that's important to your partner, it's likely that your partner will do the same for you on another occasion." [2]

Not wanting to compromise – We all have the desire to have things done "our way." In any successful relationship, each person must think in terms of two. Both partners must be able to compromise and negotiate. Sometimes, the two of you can find a middle ground. Figure out what's at stake for each of you — and defer to the partner whose needs are stronger. From *Making Marriage Work by Fighting Fairly*, "if your wife has had a particularly stressful year and you know that she finds spending time near the ocean relaxing, consider taking the kind of vacation she wants this summer. In the long

Poor timing – Constructive disagreements can easily become destructive disagreements because of timing. One person might be ready to argue, while the other is not in the correct mood to participate in the disagreement. Since the goal of a disagreement is to solve a problem, you want both participants to be ready. I have actually scheduled disagreements with my wife in order to solve a problem that is bothering us. I do not want to "ambush" her so I can win. I want the problem solved. This is also an important lesson to remember even at a work situation. Waiting until your boss is in the correct mood to bring up a problem will more likely lead to a positive outcome.

Garbage bagging – When people get into an argument, they often start with one issue, segue into another, and wind up throwing in everything but the "kitchen sink." They then bring up a host of past grudges and resentments. Discuss only one issue at a time. If you're arguing about household finances, don't throw up her tendency to be late, or his sloppiness. When you do that, you're sure to wind up fighting about personalities and not issues.

Playing psychologist – Marital arguments often give husbands and wives an excuse to practice a little dime-store psychology. Once again from Making Marriage Work by Fighting Fairly someone will say things like, "The problem is that you're just like your mother," or, "We're not going to get anywhere until you get over your neurosis." Your spouse needs to feel loved and respected for who he or she is! You are not your spouse's therapist. It's not your job to fix his or her personal problems. Trying to do so is an especially counterproductive strategy when you're in the middle of a fight.[3]

Winning at all costs – This occurs when an argument is thought of as a win/lose situation. Here the argument is tied to a person's self-esteem. They must win the argument or their self-esteem is damaged. This often happens when an argument becomes heated and overly emotional. In this case, a person will include any statements they can in the argument to win. These statements can include anything they can think of to hurt their partner's feelings in an effort to win the argument, all the while avoiding the actual

topic of the argument. Not only does this not solve the initial disagreement, but also, bad feelings can occur that last well beyond the argument.

Claiming the moral high ground – Instead of sticking to the topic of the argument, partners may shift to which one of them is the better or more considerate person. This is a completely different argument. You may be arguing over buying one of the children an expensive toy. You state, “Well that is because I care more about our children.” Now the argument shifts to who cares more about the children. That may be an argument for another time, but for now, you will want to stick to the initial focus of the disagreement.

The outcomes to family arguments can greatly differ. In some cases, one side will see the strength of the other’s position and the argument can be resolved. In other situations, a compromise can be found. Later in this chapter we will examine the different styles of dealing with conflict.

The key for any successful relationship is to engage in constructive disagreements where:

- The goal is to solve a difference that exists.
- Each person’s position is expressed.
- The focus stays on the disagreement not on other topics or personalities.
- Personal egos and the need to win can be put aside.
- The difference is resolved and no one feels like a loser.

Everyone has a style of disagreeing. As the next section describes, this style can range from hostility to non-involvement.

Reference

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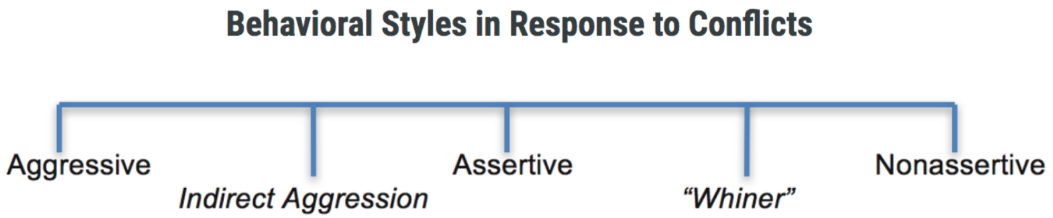
1.5: Behavioral Approaches to Conflict

As mentioned, most people attempt to avoid conflict, but when faced with a dispute, most individuals approach the conflict in one of three basic behavioral styles: ***passive or nonassertive behavior, aggressive behavior, or assertive behavior***.



1.5.1: "Behavioral Styles in Response to Conflict" (CC BY 4.0; J. Marteney)

Nonassertive or passive people ignore disputes in the hope that they will go away soon. They hope by their silence or non-involvement and that the dispute will "solve itself." Passivity is failing to express honest feelings, thoughts, and beliefs or expressing one's thoughts and feelings in such an apologetic, self-effacing manner that others can easily disregard what they have to say. The basic message of passivity is "My feelings don't matter - only yours do. My thoughts aren't important - yours are the only one's worth listening to. I'm nothing - you are superior." Passive people live in a Lose/Win situation. They lose while others win. The goal of passivity is to appease others and to avoid conflict at any cost.

In their book, LOOKING OUT/LOOKING IN, Adler and Towne write, *"Non-assertion is the inability to express one's thoughts or feelings when necessary because of a lack of confidence or skill or both." (Adler, 2002)* Nonassertive people take no responsibility for conflict resolution because they do not see themselves as causal or active agents of positive change. Things happen to them over which they believe they have no control.[1]

Nonassertive people may complain, but usually do nothing to gain control in their argumentative environment, because they fear they will lose from additional conflict encounters. For example, you go into a restaurant and order a steak dinner. You ask for the steak to be cooked medium, but when the meal is served, the steak is rare. Instead of sending the steak back, the nonassertive person will eat it (but not like it), pick at it, or let it sit. When asked by the server if everything is okay, the nonassertive person will respond by saying yes. The passive person does not want to risk engaging in conflict by complaining about the meal. Nonassertive people can rationalize that it was their fault the steak was served incorrectly; they must have not made their order clear; or that it is not important because they don't have to come back to the restaurant again.

On the other end of the behavioral scale is the aggressive person.

Aggressive people directly stand up for what he or she believes by expressing thoughts, feelings, and beliefs in a way that is often dishonest, inappropriate, and violates the rights of others. The basic message of aggression is: **This is what I think - you're stupid for believing differently. This is what I want - what you want is not important. This is what I feel - your feelings don't count**. The goal of aggression is domination and winning, forcing the other person to lose. Winning is ensured by humiliating, degrading, belittling, or overpowering other people so that they become weaker or less able to express and defend their needs and rights.

Aggressive arguers see conflict from a win-lose perspective. Aggressive behavior usually involves reacting to a conflict situation by trying to overpower a person (opponent) through verbal abuse. They do not want to be on the losing end and will do anything to win. Aggressors may use name-calling and high intensity language to intimidate the other party. If the aggressor was served a meal he or she didn't like, he or she would call the server and verbally berate him or her for serving such a lousy meal.

Much aggressive conflict resolution is short-term and is achieved only at a high emotional cost to both parties. The response to an aggressive behavior is the desire for revenge. When someone has been aggressive towards us, we want to get back at that person. This can be by returning that aggressiveness. The aggressive person lives in a Win/Lose world where they seek the win and don't care if you lose.

In between Aggressive and Non-Assertive or Passive behavior is Assertiveness.

Assertive is a combination of the two ends of the behavior spectrum. Assertiveness takes the ability to stand up for one's position, but in a way that does not hurt the other person. The goal is long-term conflict resolutions. Here a person stands up for personal rights and expresses thoughts, feelings and beliefs in direct, honest, and appropriate ways that do not violate another person's rights. The basic message of assertion is:

This is what I think. This is what I feel. This is how I see the situation. But it does not deny that the other people involved have a right to their point of view.

The goal of assertion is communication and mutuality; that is, to get and give respect, to ask for fair play, and to leave room for compromise, when the rights and needs of two persons' conflict. Assertive people feel that they are active agents for change. As such, the assertive person wants to resolve conflict in a positive way by engaging in a conflict and argument. The assertive communicator's objective is to set up a win-win or no-lose approach to problem solving. The assertive approach seeks a long-term, cooperative resolution to any conflict situation.

If the assertive person is served a meal he or she didn't like, he or she would politely call over the server and explain that the meal was not prepared per the order. He or she would ask that another meal be served. The goal is to have an enjoyable meal, not to hurt or make someone, like the server, feel bad.

In between the Aggressive and Assertive behavior is what we call**, Indirect aggression.** The behavior expresses hostility in obscure ways that usually cause more anger and conflict. Indirect aggression avoids direct confrontation. Instead, the individual will vent his or her anger at the other person in an indirect fashion.[2] (Adler and Towne, 2002)

Examples of Indirect Aggression

- **Guiltmakers:** They make the other party feel guilty to get them to agree with their point of view.
- **Subject changers:** They avoid your topic in favor of one they can win.
- **Jokers**: They try to turn every argument into a laughing matter.
- **Blamers**: They believe conflict is always someone else's fault.
- **Backstabbers**: They talk negatively about someone behind their back.
- **Withholders**: They refuse to reveal what they really feel or wan
- **Trappers**: They set verbal traps to create a fight they feel they can win.
- **Kitchen-sink fighters*:*** They throw everything into an argument, causing the argument to lose focus.

If an indirect aggressor was served a meal he or she did not like, he or she might leave no tip, or bad-mouth the restaurant to others by spreading rumors about the lack of quality in food preparation or service. The indirect aggressor hopes to get even with the restaurant for serving him a bad meal by discouraging others from going there.

In between the **Assertive** and **Nonassertive** behavior is what I call the "**Whiner**." They have just enough confidence to complain. So, unlike the Nonassertive person, they don't sit idly by and let things happen, they comment on them. They complain and hopefully find a sympathetic ear. Sounds like some of the posts you have seen on Facebook doesn't it? But they are not Assertive enough to do anything about the problem or situation. They are still victims, but are hoping that their vocalization of their problem will encourage others to help them or at least console them.

Which conflict resolution style is best? Actually, there is no one best style. Each style may be appropriate or inappropriate to the goals of the argumentative situation. It would be an overstatement to say that the assertive style is always the best way to deal with conflict resolution. If the time is short, there is an emergency, and you are dealing with a dogmatic individual, then using an Aggressive style might be appropriate. In most situations, however, it is suggested that an Assertive approach should be the critical thinker's first choice in responding to a conflict situation.

Critical thinkers have nothing to lose by trying the assertive approach first. If it fails, they can always move to a more aggressive conflict resolution stance. However, one of the drawbacks to no-lose conflict resolution is that the process usually requires a rational sender and a rational receiver. Without both, the assertive approach can be challenging.

Using assertive critical thinking methods requires not only your dedication to them, but also the cooperation of others engaged in the conflict. As Adler and Towne write, *"Though you won't always be able to gain your partner's cooperation, a good job of selling can do the trick most of the time. If you listen sincerely, avoid evaluative attacks, and empathize with your partner's concerns, you can boost the odds of getting your partner's cooperation."* [3]

For example, you have a neighbor who you feel endangers the lives of your small children by driving too fast. Your first approach should be to assertively ask him or her to drive slower. If the driver refuses and continues to drive fast, you can become more aggressive. You can use direct aggression by verbally confronting the driver or you can use indirect aggression by anonymously reporting the driver to the authorities.

Think about how these approaches might be used in relationships.

1.5.2: "Conflict Resolution" (CC BY-SA 3.0; Nick Youngson via Alpha Stock Images)

Reference

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2. Adler, Ronald B and Neil Towne. *Looking Out Looking In*. Belmont: Wadsworth, 2002
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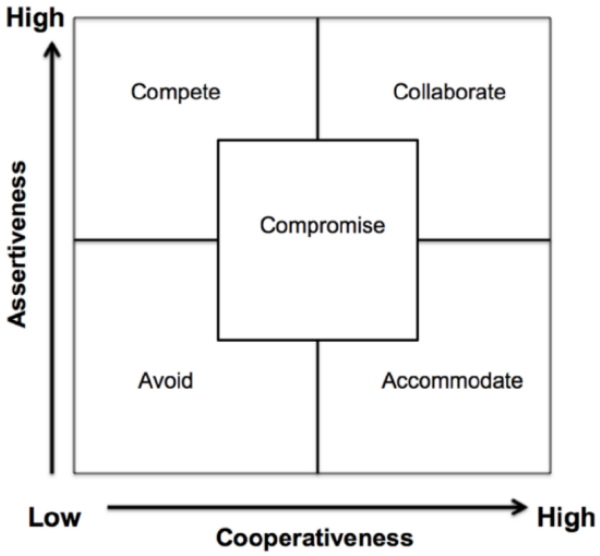
1.6: Responses to Conflict

Given these different approaches we have to conflict, two psychologists, Kenneth Thomas and Ralph Kilmann suggest that we have five options in responding to conflict.[1]



1.6.1: "Thomas and Kilmann Response to Conflict" (CC BY 4.0; J. Marteney)

As you can see on this diagram, the vertical access refers to the degree of assertiveness demonstrated by the person involved in the conflict ranging from low to high. The horizontal axis diagrams our level of cooperativeness from low to high. Given these we can see the five methods of conflict response described by Thomas and Killmann in the Kilmann Conflict Model.

Avoid: Low Assertiveness and Low Cooperativeness

1.6.2: "Alone Beautiful Dock" (CC0 1.0; Pexels via Needpix.com)

This is the action of not dealing with conflict. For whatever reason, you avoid the conflict. This action might range from totally avoiding any situation that involves conflict or merely postponing the conflict till another time. Do you dislike conflict and avoid it when you can? This action may not be totally negative as it might be a way to save time until you have more facts that you can utilize. This approach can be used when the actual issues are trivial or emotions are high. I want to see one movie, while my wife wants to see another. This is not that big a deal to me, it is a trivial decision, so I have no problem seeing the movie she suggested.

- **Benefits:** Reduce immediate stress and save the time that you would use in the conflict.
- **Costs:** Resentment and a buildup in hostility because of unresolved conflict.

Accommodating: Low Assertiveness and High Cooperativeness

1.6.3: "Submit" (CC BY-SA 3.0; Nick Youngson via Alpha Stock Images)

This is a response to conflict where we submit to others desires and positions. Since we have low assertiveness but want to be highly cooperative, we want to make others happy and are willing to go along with the opinions and decisions of others. How many times have you gone along with others so they will be happy and not be upset with you? When accommodating, we suppress our own desires and smooth things over. This action is taken when peace is more important than a real solution to the conflict. I want to go see one movie, while my wife wants to see another. I agree with her to go see the movie she wants. I think to myself, “Happy wife, happy life.”

- **Benefits:** Moves things along and build harmony
- **Costs:** Loss of credibility and influence

Competing: High Assertiveness and Low Cooperativeness

1.6.4: "Athlete Jumping over the Rod" (CC0 1.0; Pixabay via Pexels.com)

This response to conflict occurs when you have taken the stance to be totally assertive and uncooperative towards others. Here your focus is to get what you want regardless of the position of others. You may be standing up for your ideals, or just being stubborn. This creates a win-lose situation, where you fight to win and others lose. I want to go see one movie, while my wife wants to see another. We argue as I fight to convince her that we saw what she wanted to see last time and so it is now my turn.

- **Benefits:** This approach can be useful when you need to make a quick decision and you have the power to follow through with the decision.
- **Costs:** This approach can create strained relationships.

Collaborate: High Assertiveness and High Cooperativeness

1.6.5: "Achievement Business Cheer Up" (CC0 1.0; rawpixel at Needpix.com)

This position is the exact opposite of avoiding conflicts. Here all parties work together to resolve the conflict in a manner where they can both come out with a solution that allows them to get what they want. To accomplish this, all parties need mutual respect, trust and some creative problem-solving skills

I want to go see one movie, while my wife wants to see another. We work out how we can see one movie now and the other one next week.

- **Benefits:** High quality decisions
- **Costs:** Takes time and effort.

Compromise: At the center of the model

1.6.6: “Give and Take" (CC0 1.0; Geralt on Needpix.com)

Compromise is partially assertive and cooperative where both sides can get something they want, but not everything. This is the *“Lets Make a Deal”* approach to conflict resolution. Both sides will not be totally happy or totally disappointed with the final outcome

We often use this approach when we are faced with polarizing choices. Here, getting something is better than getting nothing. I want to go see one movie, while my wife wants to see another. We settle on a third movie that both of us can “live with.”

- **Benefits:** This approach is often very pragmatic and settles, at least for the moment, the conflict.
- **Costs:** This approach partially sacrifices personal needs.

Reference

1. Kilmann, Ralph and Kenneth W. Thomas. "Developing a Forced Choice Measure of Conflict-Handling Behavior: The "Mode" Instrument." *Educational and Psychological Measurement*, vol. 37, no. 2, 1977, pp. 309-325.

1.7: Solving Conflict Through Understanding

Steven Covey in his book, **The 7 Habits of Highly Effective People**, suggests that the best approach to resolving conflict is to *"Seek first to understand, then to be understood."* [1]

Normally in a conflict situation we dive headfirst into the fight, expressing our position without really paying much attention to the opposition. We may think to ourselves "Why bother listening to them, they are wrong, they need to hear my point of view." But Mr. Covey's suggestion is powerful.

1.7.1: "Steven Covey" (Public Domain; Sterling Morris via Wikimedia Commons)

By really understanding the person, or organization, you are engaged in conflict with, you have a much better idea of how to advocate for you position. You can discover the strengths, weaknesses, motivations and foundations for this different point of view. Given this information, you can better structure your argument. The first step is to pause and really understand the differences you are having with the other person.

In the last few pages, you have been given suggestions on how to persuade others. But just suppose that the other person's argument is actually better than yours? As strong of an advocate as you are for a certain position, when arguing, especially informal and personal arguing, it is important to listen with an open mind. It is great advice to carefully listen to other points of view first, for not only getting information, but if you listen with an open mind, you might even find out that they just might be right.

Yes, it is actually ok to change your mind! It is the strength of a critical thinker to realize that someone else's position is superior, not a weakness.

I know this is hard to accept, but as a real critical thinker it is okay to listen to an argument, and upon realizing it is superior to yours, you can drop your argument and accept this new position. When in college, years and years ago, I argued for nuclear disarmament. I wanted all of the nuclear weapons in this country dismantled for fear of nuclear war and total devastation. Then I heard the argument about mutually assured destruction. The argument was that both the Soviet Union and the United States had enough nuclear weapons to assure the destruction of each other. Because neither country could win, there would never be a nuclear war. I found this argument to be more reasonable than my original position and so I changed my mind. I decided not to be dogmatic and hold on to my original position because of my ego.

Alex Lickerman writes in Psychology Today (Lickerman, 2011) his thoughts about changing your mind.

> *I wondered why changing one's mind is often so difficult. After all, both the world and our view of it are constantly changing; circumstances never remain static, so why should our responses to them be forever locked in their initial form?*
>
> *Part of the reason, I think, is that we get attached to answers like we do possessions. Once we give an answer, it's no longer simply an answer but now our answer. Once we commit to it, we instantly become emotionally biased in favor of it, often even becoming blind to the shortcomings we previously saw in it ourselves. We become, in short, highly resistant to changing our minds because our answer has become part of who we are. And any threat to it feels like a threat to us.*[2]

Let's not get too attached to our ideas to the point where we are not willing to challenge them.

We will examine this aspect of critical thinking often in this book. But just ponder this; **if you never change your mind then you will never intellectually grow.** You will remain at the level you are now, forever. That is the sign of a dogmatic person. You hold

on to your original argument for the sake of your ego, and not for the quality of the argument.

Reference

1. Covey, Stephen. *The 7 Habits of Highly Effective People.* New York: Simon & Schuster, 1989
2. Lickerman, Alex. "Changing Your Mind." *Psychology Today,* https://www.psychologytoday.com/us/blog/happiness-in-world/201108/changing-your-mind. Accessed 30 October 2019.

1.8: Winning by Losing

Ask yourself this question, “What do you “win” when you win an argument? Besides a boost to your personal ego, what do you actually win when you defeat another person in an argument? Now, what do you win when you “lose” an argument? You could win additional knowledge, new insights into the topic you are arguing leading to personal growth.

In a TED Talk, Philosopher Daniel H. Cohen, argues the importance of losing an argument.

> *"There is a concept in Judaism that I have always really loved, which is that arguments should be "l'shem shamayim," literally "in the name of heaven." The broader concept is that the goal of an argument should be to reveal or explore a truth that's larger and more important than the egos of the arguing parties. When an argument is l'shem shamayim, it's worth returning to and studying, even once a clear winner has been established -- as one does with important, precedent-setting legal cases.*
>
> *When I find myself in an argument, I always stop to consider whether I'm arguing for the sake of being right or arguing for the sake of illuminating the truth. I think it's a helpful self-check, with or without the religious context."* ***Dan Cohen*** [1]

Only when you can express your disagreements using your critical thinking skills can you really take charge of your life and gain a measure of control over your decision- making environment. In this complex, highly technical world, it is really impossible, undesirable and counterproductive to run away from conflict and argument. A more rewarding approach would be to be able to tackle conflict and deal with it in a constructive and rewarding manner.

The skills and information offered to you in this book are designed to help you increase the validity of the decisions you do make.

Reference

1. Cohen, Daniel. "For Argument's Sake." *TED*, uploaded February 2013, https://www.psychologytoday.com/us/blog/happiness-in-world/201108/changing-your-mind. Accessed 30 October 2019.

1.9: The Focus of This Chapter

We begin this book by examining personal argumentation. The goal of this book is to offer you critical thinking tools that you can use to participate more effectively in the many argumentative situations and environments in which you find yourself.

To reach that goal, this chapter wanted to focus on 3 key ideas:

- **Arguing is not to be avoided**. We all have personal and professional disagreements. If we do not argue and instead cover them up, we just let hostility grow.
- **We all have a natural style of facing conflict**. Each conflict style is useful given the situation of the disagreements. Your strength will occur when you become more flexible in your styles so you can use the most effective style in every situation you face.
- **You do not have to win every argument**. The person, or people, you are arguing with just might have a better argument. You are not less of a person when you abandon your original position and accept another's. It is fine to lose an argument because that is when you learn and grow as a person.

CHAPTER OVERVIEW

2: Communicating An Argument

2.1: Our Communication “Frames” Our Arguments

Your Saturday night poker game is in full swing. You are holding five cards. You are trying to decide whether these five cards are better than any of the other hands around the table. If you feel they are, you will bet; if not, you will fold and wait for the next hand. You wish you had an idea of what the other players had. You look over to your opponent to your right to see what he is going to do. Is he going to raise or fold? What should you do? The tension mounts.

One by one you observe the players around you. In their own subtle way, each of them is communicating some information to you. You go around the table gathering information about each player before you decide what to do. One player is looking nervously around and constantly rechecking his cards. He probably doesn’t have too good a hand. Another player keeps asking whose bet is it. He seems anxious to play. It could be a bluff, but you think maybe he really does want to bet and that his hand may be better than yours. A third player is quietly fingering his chips, as if ready to bet as soon as someone else does. You don’t like the looks of this at all. He appears far too confident.

In the end, you decide to sit out this hand. It’s a good thing too, because the quiet person was, in fact, ready to bet and had a hand that would have beaten yours. This time you made the right decision.

This is what this book is about. No, not playing poker, but using your critical thinking capabilities in a communication situation to improve your argumentation and decision- making skills.

First, we need to understand four important concepts:

- Critical thinking is a skill which can be improved.
- All decisions are made in a communication environment.
- A better understanding of how we think and how we communicate improves our argumentation skills leading to making higher quality decisions.
- Understanding language and how it effects our thinking improves our argumentation skills.

Critical thinking and argumentation takes place not in a vacuum, but within the communication process. It is important to realize that the more we understand how communication affects critical thinking and argumentation, the more we can improve our skills and increase our effectiveness. First, miscommunication may lead to conflict, or aggravate conflict that already exists. This is one of the reasons we have arguments. The second reason we have arguments is when there is an actual disagreement between people.

By improving your critical thinking and argumentation skills, you can be more in charge of your life. Instead of letting those around you exert undue influence and guidance that could lead to decisions which would not be in your best interests, you can be in charge of yourself. When you are finished with this chapter you will be on your way improving the manner in which you make decisions. The best way to begin is to first examine the process of communication.

2.2: Defining Communication

As instructors look out over their classes, we receive varying verbal and nonverbal messages from our students. Some students send the message that the course material stimulates them, while others indicate they are disinterested, confused, curious, or bored. Actually, every student in class is sending a message whether they mean to send them or not. But the instructor can easily misinterpret this communication. The student who looks interested could actually be faking it to get the instructor to like him.

This situation illustrates two key aspects of communication:

- **It is impossible not to communicate**
- **Perfect Communication is impossible**

It is impossible not to communicate**.** We are constantly sending "messages" to those around us. These messages may be intentional or unintentional. Our hair style, the car we drive, involuntary facial expressions, even actions like showing up late to a meeting are all examples of communication messages. In a face-to-face class I would have a student stand up in front of the class and attempt **not** communicate with the class. After about 5 seconds I would ask the class if they received any messages. I would then hear answers like, "He was nervous" or "He was trying to ignore us." The student couldn't help but send a message whether intentional or not.

Perfect communication is impossible. The more significant the differences are between communicators, the greater the potential for miscommunication. This difference could be anything from their age, to their gender, their culture, education, religion, and many more. When my wife and I first started dating those many years ago, we had many differences of experiences. Now that we have been together for over 40 years and have had many common experiences, our communication is more effective. We can finish each other's sentences. We understand each other much better, but our communication is still not perfect.

So, remember, perfect communication is impossible. Richard Workman writes in his book, Information Anxiety (Wurman, 2000),

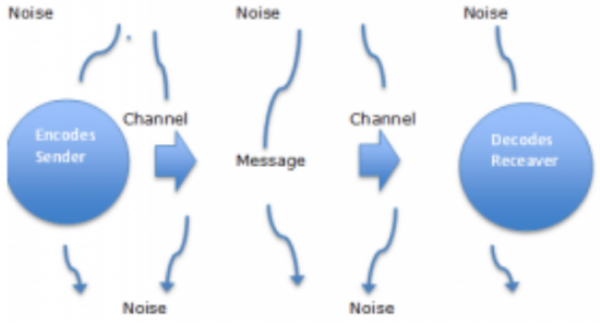
> *"We are limited by a language where words may mean one thing to one person and quite something else to another. There is no ordained right way to communicate. At least in the absolute sense, it is impossible to share our thoughts with someone else, for they will not be understood in exactly the same way."* [1]
>
> Communication expert Joseph DeVito further explains this communication challenge, when he states:
>
> *"Communication occurs when one person (or more), sends and receives messages that are distorted by noise, occur within a context, have some effect, and provide some opportunity for feedback."* [2] *(DeVito, 2018)*

Reference

1. Wurman, Richard Saul. Information Anxiety. Indianapolis: Prentice Hall, 2000
2. DeVito, Joseph. Human Communication: the basic course. Pearson, 2018

2.3: The Communication Model

Claude Shannon was a research scientist at Bell Telephone Company. In an attempt to improve communication along the telephone lines he worked to minimize the distortion that was taking place. Warren Weaver took Shannon's concepts for the telephone and applied them to interpersonal communication. The end result was one of the most popular models of communication. Aptly named, the "Shannon-Weaver Model." [1]



As the Shannon-Weaver model suggests, a message begins at a source, is then relayed through a transmitter where it is sent using a signal towards a receiver. This message travels from sender to receiver while encountering all kinds of noise (sources of interference). The last step is for the receiver of the message to let the source know if the message was understood. This is referred to as Feedback and is a repeat of the communication process described here but for the Receiver back to the Sender.

Imagine that I want to let my wife know how much I love her. In my head, I have a thought of love. Since she is not a mind reader, I have to take my idea and select words or actions that represent my thought. I decide to send her flowers. In the middle of her hectic day she receives flowers from me with a note that I was thinking of her. She looks and smells the flowers, reads the note, and thinks over everything. Her first reaction is to wonder what I am apologizing for. She cannot think of anything and so she realizes that this is an expression of love. She texts me and thanks me.

Based on the Shannon Weaver idea, one person has a thought or idea in his or her head and wants to transfer it over to another person. Each part of the model is important, and the correct or incorrect use of each part can result in communication success or communication failure.

Sender is the source of the message. The sender has some information or content material they want someone else to know. It is generally acknowledged that the sender of the message has the primary responsibility for the success or failure of the communication act. This is because the sender controls many more of the variables of the communicative act than does the receiver of the message.

Encoding is the process by which the source takes an idea or thought and selects verbal and nonverbal symbols from his or her environment to send which he/she feels accurately represents that idea or thought. Many factors play a part in the encoding process including: social system, culture, past experiences, gender influences, formal and informal education, expectations, language, etc.

Message is the content of the communication. This is what the sender wants his/her audience to know. Message could be made up of such things as: composition, sentence structure, spelling, grammar, gestures, even objects like flowers.

Channel is the medium through which the message must pass. The channels of communication are our senses: sight, sound, touch, taste and smell. Marshal McLuhan in his book, Understanding Media, says, *"In a culture like ours, long accustomed to splitting and dividing all things as a means of control, it is sometimes a shock to be reminded that, in operational and practical fact, the medium is the message."* [2]

For example, when you have finally fallen in love and you want that person to know how you feel. You decide on an interpersonal approach, but now you still have a choice as to the medium you can select to transmit your message. You could discuss it with that person, you could write a letter, you could send a singing telegram, or you could send flowers. The message may be the same in all four cases, but the medium affects how the message is interpreted. The selection of appropriate channels or senses is very important to the success of communication.

Receiver is the target audience of the message. There may be a chosen or primary audience for whom the message is intended, and a secondary audience, of all others who gain access to the communication. While receivers do not start the communication process, they do have accountability for their communication behaviors with respect to listening and providing accurate feedback.

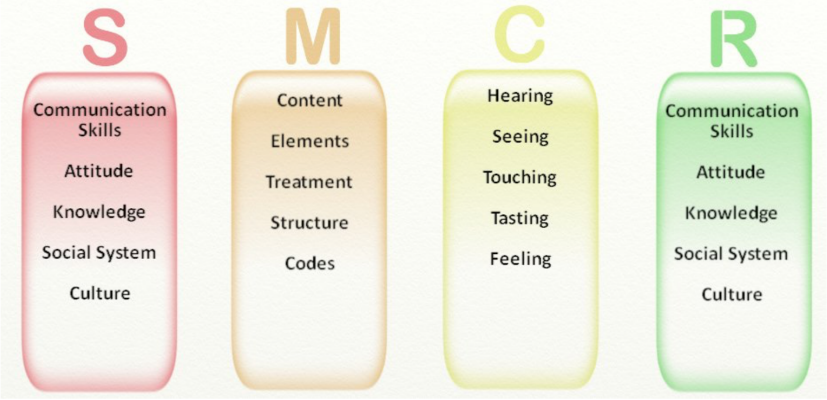
Decoding is the ability to translate the message code into symbols that the receiver can understand. The object is for the receiver to interpret the message as the sender encoded it. This can never be done exactly because the sender and receiver do not share identical backgrounds from which the symbols have been selected. The best we can hope for is to come close. Why? The same influences that affect encoding: social system, culture, past experiences, gender influences, formal and informal education, expectations, language, etc., also affect decoding.

Noise is anything that disrupts or distorts the communication process. Noise may include an external annoyance such as someone coughing next to you or something psychological like a pessimistic attitude, which distorts any message sent. Noise can be external or internal and appear at any point in the communication process.

Feedback is information that is sent back to the source. It can come in many forms, from the receiver falling asleep to a verbal message. Feedback tells the sender how accurately you have decoded the message, and how you have decided to respond to it. Communication is a flowing process that moves from a sender to receiver and back again. Communication does not start and stop or move from one direction to another. It is a flowing process.

Shannon and Weaver's model clearly demonstrates why even the simplest communications can be misunderstood. What if my wife looked at the flowers and thought, "What is he apologizing for?" "What did he do wrong?" "Just what is he guilty of?" Communication effectiveness depends on the successful integration of all the parts of the communication process.

In 1960 David Berlo created a linear model of communication as a process where a source intentionally set out to change the behavior of a receiver. Below is the Berlo Communication Model which fills in some of the key aspects of each part of the communication model; Sender, Message, Channel and Receiver.[3]



Reference

1. Mishra, Sneha. "Shannon and Weaver Model of Communication." 2017, https://www.businesstopia.net/commun...-weaver-model- communication (Accessed June 15, 2017)
2. McLuhan, Marshall. Understanding Media. Boston: MIT Press 1994
3. Berlo, David K. The Process of Communication: An Introduction to Theory and Practice. New York: Holt, Rinehart and Winston, 1974

2.4: Verbal and Nonverbal Communication

Communication is the transfer of information from one person to another. Studies indicate that daily human communication breaks down roughly this way: 9% writing, 16% reading, 30% speaking, and 45% listening. Humans communicate on two levels, the verbal level and the nonverbal level. Our everyday communication is a constant mix of verbal and nonverbal message sending and receiving.

Albert Mehrabian describes 3 Levels of Interpersonal Communication. Whenever we communicate with another person we are communicating our message on 3 different levels. Below are the 3 levels and what percentage each of them contributes to making the message clear.

- 7% Words: interpreting the exact words that are being spoken
- 38% Paralanguage: how we say those words with our tone, intonation and verbal pace.
- 55% Non-Verbal signals: including everything from facial expression to body posture.[1]

Verbal communication is defined as any means of communicating that uses language (words, numbers or symbols). Verbal communication requires an organized language system. Such a system is composed of a group of labels used to describe people, events and things in our environment. These labels are conveyed from one person to another by a variety of means including vocalization and writing.

Nonverbal communication is defined by Communicologists Tortoriello, Blott, and DeWine:

> *"The exchange of messages through non-linguistic means, including: kinesics (body language), facial expressions and eye contact, clothing and physical appearance, tactile communication, space and territory, culture and social system, paralanguage (tone, pitch, rate, inflection), and the use of silence and time."* [2]

Your nonverbal communication will affect, positively or negatively, the impressions and attitudes people form about you. At the same time, your ability to interpret different types of body language will enhance your ability to participate in and understand conversation.

Human communication has a better chance of success when nonverbal messages and verbal messages work in harmony together. Dysfunction and confusion result when the spoken word is contradicted by body messages. A communication "double-bind" is created when our verbal and nonverbal communication contradict each other. It's the old saying, "Your lips say no, but your eyes say yes." This can often lead to communication misunderstanding or failure. Communication success improves when there is a consistency between the verbal and nonverbal signals.

An example of inconsistency is sarcasm. Sarcasm occurs when the words used and the tone of those words contradicts each other. "You look good" can mean two different things depending on how those words are spoken. Another example is the phrase, "Shut up." This can mean either "Be quiet" or "Are you kidding?" depending on the tone used. My wife has about 20 different ways of saying my first name. Each way has a very different meaning.

Studies suggest we are not as effective communicators as we might think we are. The Rand Corporation says that poor communication in the workplace costs this nation about 1% in lost GDP (gross domestic product) economic growth every year. And 1% of $18 trillion is enormous. Michigan State University says that first attempt at communication success, defined as the receiver getting the message in the way the sender intended, is only one in five, or 20%.

Communication is interactive, so an important influence on its effectiveness is our relationship with others. Do they hear and understand what we are trying to say? Are they listening well? Are we listening well in response? Do their responses show that they understand the words and the meanings behind the words we have chosen? Is the mood positive and receptive? Is there trust between them and us? Are there differences that relate to ineffective communication, divergent goals or interests, or fundamentally different ways of seeing the world? The answers to these questions will give us some clues about the effectiveness of our communication and the ease with which we may be able to move through conflict.

One key aspect of communication that occurs in the message and relates to the critical thinking is the **structure** and **vocabulary** of a language.

Reference

1. Tortoriello, Thomas R. and Stephen J. Blatt and Sue DeWine. Communication in the Organization: An Applied Approach. New York: McGraw-Hill, 1978

2. Ludwig Wittgenstein, Quote, https://www.brainyquote.com/quotes/l...n_138017?img=2 (accessed October 30, 2019)

2.5: The Influence of the Structure of Language

Language influences not only how we interpret our world, but also our thinking process. Philosopher Ludwig Wittgenstein explored the relationship between language and how we interpret our world. Here are some of his thoughts:

> *"The limits of my language means the limits of my world."* [1]
>
> *"Like everything metaphysical the harmony between thought and reality is to be found in the grammar of the language."*
>
> *"A new word is like a fresh seed sown on the ground of the discussion."* [2]
>
> *"Language is a part of our organism and no less complicated than it."* [3]

Wittgenstein also suggests, **the structure of our thinking is related to the structure of our language.** The term, "linguistic determinism" is used to suggest that there is a causal influence of one's linguistic pattern on our cognitive or thinking process. In other words, our language guides our thinking. There is a continuing philosophical debate on the question, "Can we think about something that is not included in our language?" Recent philosophy suggests that it is language which molds our thoughts.

Language shapes our thinking in two ways.

- **The vocabulary of our language**
- **The grammar, or structure, of our language**

Our vocabulary gives us more avenues of thought. The more words you have about a subject, the more ways you have to think about that subject. If I just had one word that represented the person I am married to, like wife, then I couldn't think of her in terms of "partner," "companion," "lover," "master shopper," and so on. The fewer words we have to describe a person or situation, the less ways we have to think about it. This was the basic concept for George Orwell's book *1984*.

In *1984* the main character, Winston Smith, works in the government's "Ministry of Truth." His Job is to rewrite news stories to be consistent with the way in which the government wants you to think. George Orwell uses his concept of Newspeak, an earlier essay, that argues that to control what people think, control their language and only those thoughts consistent with that language will occur. [4]

> *"Language is the formative organ of thought. Intellectual activity, entirely mental, entirely internal, and to some extent passing without a trace, become through sound, externalized in speech and perceptible to the senses. Thought and language are therefore one and inseparable from each other."* [5]

The Whorf-Sapir hypothesis maintains that the words of a particular language help to determine the way that people interpret events that occur. The hypothesis theorizes that thoughts and behavior are determined, or are at least partially influenced, by language. This misunderstanding can become even more pronounced when those communicating are from two or more cultures or subgroups.

As Sapir has written, not only is it a misunderstanding of words that can cause confusion and differences of opinion, but the structure of the language, or grammar of the language, influences how we think and see our world. Sapir and Whorf agree that it is our culture that determines our language, which in turn determines the way that we categorize our thoughts about the world and our experiences in it. Whorf says that your language affects how you think, which in turn affects how you deal with incoming information, and ultimately how you use it. Thus, the words we select to describe people's internal or external attributes shape the way we feel about these people.

There is a clear difference in the attitude we are expressing given the words we select to refer to someone's ethnicity, gender, sexual preference, religion, culture, or personal traits. Essentially, our word choices allow us to indirectly express our "real" feelings about the people, events and things in our environment. Much the same can be said for any group or subculture that has its own language.

Sapir and Whorf write,

> *"No two languages are ever sufficiently similar to be considered as representing the same social reality. Language is itself the shaper of ideas, the program and guide for the individual's mental activity, analysis of impressions. The fact of the matter is that the 'real world' is to a large extent unconsciously built up on the language habits of the group."* [6]

Language is one of the most powerful agents of enculturation, and therefore we must choose our words very carefully. In William Haviland's Cultural Anthropology, he writes,

> *"... language is not simply an encoding process for voicing our ideas and needs but is rather a shaping process that, by providing habitual grooves of expression which predispose people to see the world in a certain way, guides their thinking and behavior."* [7]

Reference

1. Ludwig Wittgenstein, Quote, https://www.brainyquote.com/quotes/l...n_138017?img=2 (accessed October 30, 2019)
2. Ludwig Wittgenstein, Quote, https://www.brainyquote.com/quotes/l...enstein_147279 (accessed October 30, 2019)
3. Ludwig Wittgenstein, Wikiquote, en.wikiquote.org/wiki/Ludwig_Wittgenstein(accessed October 30, 2019)
4. Orwell, George. 1984. London: Secker & Warburg, 1949
5. William von Humboldt, 'On Language': On the Diversity of Human Language Construction and Its influence on the Development of the Human Species (Cambridge: Cambridge University Press, 1999) 54
6. David Edward Cooper, Philosophy and the Nature of Language (A Longman Paperback 1973) 101
7. Haviland, William. Cultural Anthropology. Cengage Learning, 2013

2.6: Using Words in an Argument

There are over 6,000 languages in the world. As researcher John McWhorter writes,

> *"By language, we do not mean solely words, but the grammar that we use to put them together to produce utterances that reflect our impression of our lives, experiences, and environment, as well as enable us to affect people and events around us."* [1]

Language is fundamental to critical thinking. Language can determine how productive our argumentation will be. Using the wrong word to the wrong audience is almost a sure way to have our arguments rejected by that audience.

Meanings are assigned to words arbitrarily, and the meaning of words in our language can change as social groups within the society use them for their own purposes. This makes our language very much alive and extremely fluid. The good critical thinker uses language that meets the needs and expectations of the audience, and is appropriate to the time, place, person and occasion. If the critical thinker cannot select appropriate language to fit his or her thoughts, the meaning of the message is lost.

Four areas of language use are important to critical thinking: **word choice, definition, ambiguity, and intensity.**

Word Choice

We use language all the time, but not always with the success we expect.

The English language contains roughly 500,000 usable words, and the 500 most common words in the English language have a combined total of more than 14,000 different meanings. It seems so simple to merely select the symbol or symbols you know and that you hope your audience will understand. It is not easy to make sure your audience has the same idea of a word that you have. After all, the meaning of words is not unique to the actual words themselves but in the minds of the people who use and receive them.

Understanding is heavily related to vocabulary. If you don't have the proper word, it becomes difficult to communicate a concept. Thus, the more concepts you understand, the more powerful your thinking can be, the more combinations you can make, and the more exact you can be in relating a symbol to a thought to an audience. Good word choice involves being able to look critically at language and select the words that most accurately convey the message. It means being able to choose just the right words to make the message sound natural and precise. Word choice is what gives exactness to details and helps the communicator paint memorable pictures in the audience's mind.

Care in word choice helps us adapt the message to the audience and reduces the chance of miscommunication. Remember: Meaning is in the mind and not in the symbols (words). The language goal of the critical thinker is to select the appropriate words to match the time, place, occasion and person. This is no more than saying "the right thing at the right time."

Definition

One way to avoid the problems caused by Word Choice is to define the terms you are using. The primary function of definition is to get sender and receiver on the same semantic wavelength in order to avoid unnecessary semantic hurdles that prevent a discussion of more important issues. In other words, to help both sides understand what the argument is all about.

Definition is also used to indicate the sense in which you may be using a term familiar to you, but your use of the term might differ from how someone else might use that word. Words convey two different meanings to the audience: a denotative and a connotative meaning.

The **denotative meaning** of a word refers to the way a word is generally used or the meaning that people most frequently attach to a word. When a word has multiple meanings, definition number one in the dictionary is usually thought of as the denotative meaning of the word.

The Random House Dictionary of the English Language contains over 315,000 entries and includes up-to-date etymologies, the origins of the specific words. New definitions are added to existing words to reflect current usage and expression. Words, which were once considered slang, have now been moved into the main dictionary. The major influences on new words and new definitions come from generational language changes, contemporary music, the influence of media on language, and cultural expansion and diversity. Below is a list of some of the words that have been added.

1940's
ack-ack, apartheid, atom bomb, baby-sit, barf, bazooka, cheeseburger, crash-land, flying saucer, gobbledygook

1950's
aerospace, alphanumeric, brainstorming, car wash, cha-cha, digitize, do-it-yourself, ethnohistory, in-house, meter maid

1960's
area code, ASCII, biohazard, Brownie point, crib death, doofus, disco, glitch, microwave oven, Op-Ed, sexism

1970's
airhead, bean counter, biofeedback, deadbeat dad, diskette, electronic mail, junk food, surrogate mother, gentrify

1980's
AIDS, boom box, caller ID, channel surf, cyberpunk, dis, greenmail, sandwich generation, trophy wife, voice mail, wannabe

1990's
anatomically correct, bad hair day, brux, digerati, granny dumping, olestra, soccer mom, step aerobics, uptalk, World Wide Web

2000's
9/11, global warming, bailout, surge, dot.com, texting

2010's
bridezilla, Arab spring, live-stream, selfie stick, cyber warrior, five-second rule, brain fart, mic drop, emoji

http://www.randomhouse.com/features/rhwebsters/

The **connotative meaning** of the word refers to the way a person emotionally responds to it. The word "mother" has a common denotative meaning to most people, but each person may react differently to the word. For some, "mother" conjures up thoughts of kindness, trust, and love. For others, "mother" may evoke thoughts of depression, fear, and hate. Connotative meanings are a necessary and important part of human communication. Being creatures of emotions, it's a fact of life that people will use some words that will evoke strong reactions. "My spouse" has the same denotative meaning as "my life partner" but you do get a different connotation from the two terms.

Without connotative meanings, we would be unable to describe ourselves fully or have others understand us. Problems occur, however, when people claim to use a word in a denotative way, when they are really expressing their emotional feelings. You call your old car an "antique." To you, the connotation is that it is a valuable piece of history. To your friend, the connotation is that it is a dangerous piece of junk. Whether the car is a classic or a piece of junk is a matter of opinion, not fact. This difference is easy to forget and is the cause of many destructive arguments.

Reference

1. McWhorter, John. The Story of Human Language. Teaching Company. Chantilly, 2004. DVD

2.7: Creating Mutual Understanding

Disagreeing over what a word means can lead to a total breakdown of the argumentative process. The critical thinker can use any of the following ways to define any terms that could lead to a communication misunderstanding and, in turn, a collapse of the argumentative process.

Dictionary Definition –This is also known as formal definition, and is probably the most common form for clarifying what a word means. Some people consider this the most precise way to define a word, because the dictionary attempts to differentiate the word from all other members of its class.

There are many dictionaries (regular, legal, medical, scientific, psychological, and behavioral), and each discipline's dictionary will define the word as it applies in that particular field. Too often students will use a popular dictionary like Webster, to define an academic term. The definition this type of dictionary supplies is just too general for real academic use. Instead, in an academic setting, a more precise definition needs to be used.

Operational Definition – Sometimes it is most useful to define a word by its function or operation. What does the word or term do that separates it from other words or terms in the same classification? For example, a "good car" is one that starts every morning, gets 25 miles per gallon, requires little maintenance, has low insurance rates, and costs less than $27,000. Explaining a good car in terms of how a good car operates gives a more mutual understanding of the phrase.

Definition by Example – The method is the attempt to define a word or phrase by citing specific instances of that word or phrase. For example, The Tesla 3, BMW 230i, The Infiniti I35, and the Toyota Camry are "good cars." The Griffins, Simpsons, and Sopranos are "nontraditional American families." Of course, for this type of definition to be effective, your audience would need to have experience with these examples

Definition by Negation – This form of definition tells us what a word or phrase is not. A "good husband" is not one who cheats on his wife. The sport of "baseball" does not use a hoop or have end zones. Robbery, rape, murder, or kidnapping are not "white collar" crimes.

Definition by Etymology – This is defining a word or phrase by citing its historical roots (when and how was the word or phrase first used) or point of origination (what is the word or phrase's Latin or Greek origin). For instance, "Euthanasia" comes from the Greek word "eu" (good), and "thanatos" (death), or good death. Sometimes citing the history of the word can help clarify its meaning. The phrase "catch-22" refers to a no-win dilemma. Author Joseph Heller created this term in 1961 in the book titled curiously enough, "Catch 22."

Special Definitions – Much of our everyday conversations may contain an informal quality that comes from our use of slang and colloquialisms. Many of these slang terms can be confusing to a visitor, from another country, from another region of the country, or from any other culture, including another generation. Much of the slang we encounter is through the media, such as television, film, and radio. Many subcultures develop words that contain special meanings only understandable within that subculture. Unfortunately, slang can also be vulgar and offensive and linked to racist, sexist, and prejudicial expressions that give a confusing impression of current language habits.

Clarity in language can only occur when the sender and receiver establish common ground regarding the meaning of words. Unless this common ground is established early on, the argument can turn into a battle over which side is using a word correctly. To avoid this, when someone uses a word that you don't understand, ask him or her to define the term or explain what he specifically means by using that word or phrase.

Appreciating Slang's Creative Contributions to Language

By Mindshift December 31, 2014

English professor Anne Curzan makes an unusual request of her students at the University of Michigan — she asks students to teach her two new slang words. While some might cringe at the use of YOLO or hangry in an academic setting, Curzan, who is also a language historian, appreciates the creativity in the words that make their way into the vernacular, and ultimately, the dictionary. In her TED video, she explains the role of dictionary editors and how they view language, including slang:

"Dictionaries are a wonderful guide and resource, but there is no objective dictionary authority out there that is the final arbiter about what words mean. If a community of speakers is using a word and knows what it means, it's real. That word might be

> slangy, that word might be informal, that word might be a word that you think is illogical or unnecessary, but that word that we're using, that word is real." [1]
>
> TED Video at: https://www.ted.com/talks/anne_curza...es_a_word_real

Semantic agreement is necessary if an argument is to overcome definitional problems and move on to the more substantive content that led to the argument in the first place. Understanding the meaning of a word or concept gives you another tool with which to build a foundation for a constructive argument. Without clarity between participants, words can be misinterpreted and dangerous.

2.8: Ambiguity

When we argue, we use language that we assume the recipients can understand. We select words with limited ambiguity. Arguers selecting ambiguous language run the risk of being misunderstood and face rejection of their advocated point of view.

What do we mean when we call language ambiguous? Here are a few definitions of what ambiguity in language is:

> *"A word, phrase, or sentence is ambiguous if it has more than one meaning."* [1]
>
> *"Any verbal nuance, however slight, which gives room for alternative reactions to the same piece of language."* [2]
>
> *"In order to qualify as an ambiguity an expression must generate not only "at least two different meanings", but also two incompatible and unrelated meanings. It is only then that an expression is truly ambiguous."* [3]

Given all the many differences humans have from culture to social system to levels of education, to regional differences and more, communicating by just using words cannot be 100 percent efficient. There will always be the possibility of ambiguity. Language serves as a vehicle for transferring meaning between a sender and his/her audience. Our communication goal is to have our target audience understand the content of the message in the manner we intended.

Reference

1. Kent Bach, Routledge Encyclopedia of Philosophy entry on Ambiguity
2. William Empson, Seven Types of Ambiguity, London: Hogarth Press
3. Drazen Pehar, "Use of Ambiguities in Peace Agreements," Language and Diplomacy, Malta: Diplo Projects

2.9: Euphemisms

A **euphemism** is a less direct term, used in the place of a more specific term, which may be considered offensive to the audience. When used in this way, euphemisms tend to "sanitize" or cleanup one's language. The reason for using a euphemism is to soften the impact of a word to make it more audience-acceptable. The problem is that "more acceptable" means that the word used in place of the one that would have been used, is often less precise.

A euphemism can basically be any word that a listener can associate it with the offensive or taboo term which it replaces, or understands the connection between the word and the taboo. There is no shortage of taboos pertaining to the human body, sexuality, bodily functions, death, politics, war, or any other subject. For example:

- *domestic engineer* is used in the place of "housewife"
- *eliminate with prejudice* is used instead of "kill"
- *correctional facility* rather than "prison"
- *administrative assistant* rather than "secretary"

As you may be seeing, euphemisms are a manipulation of the connotation of a word. Euphemisms are sometimes necessary in order to soften a word that an audience may find offensive and unacceptable, thus leading to immediate rejection of an advocate's point of view without fair evaluation of that view. However, they should be used sparingly, and with extreme care, because euphemisms increase the ambiguity level in all areas of communication including argumentation.

In his essay "Politics and the English Language," George Orwell claimed that the

> *"mixture of vagueness and sheer incompetence is the most marked characteristic of modern English expression, and especially of any kind of social, cultural or political writing." People have to think less if they use vague language, he said, and, "this reduced state of consciousness, if not indispensable, is at any rate favorable to conformity." And he adds, "But if thought corrupts language, language can also corrupt thought."* [1]

Reference

1. https://faculty.washington.edu/rsode...shLanguage.pdf (Accessed December 11, 2019)

2.10: Double Speak

Such language described by Orwell is called doublespeak. It is explained by William Lutz, author of the book "Doublespeak", as language which "*makes the bad seem good, the negative appear positive, the unpleasant appear attractive or at least tolerable. It is language that conceals or prevents thought.*" [1]

Lutz identifies several kinds of doublespeak according to whether euphemisms are used to mislead or deceive about an ugly reality or embarrassing situation, or whether pretentious, inflated, obscure or esoteric jargon is used to give an air of prestige, profundity or authority to one's speech or to hide any ugly realities or embarrassing matters.

Another kind of doublespeak, which Lutz mentions, is language which is clear and accurate but implies something which is false. For example, the expression "no cholesterol" can be found on the front of a potato chip package whose ingredients (clearly listed on the back of the package) include saturated fats (which are converted to cholesterol when eaten). Orwell and Lutz remind us that a critical thinker must be on guard against subtle abuses of language like: using euphemisms, jargon, and obscure language to deceive and mislead. The use of ambiguous language by an arguer can create three distinct problems for the critical thinker.

Ambiguous language can cause confusion. Advertisers use phrases like "New and Improved," and "Faster Acting," to purposely create ambiguity in their audiences. This allows individuals to independently interpret such phrases as the needs of the different audiences warrant. In the same way, ambiguity associated with language like "good time" or "a lot," allow people to interpret things individually, and perhaps differently, from the way the sender of the message intended.

Ambiguous language can lead to over-generalizing and stereotyping. Thinking in ambiguous terms tends to lead to categorizing large groups of people, events, and things under one label. For instance, "Young drivers are all alike, inconsiderate and dangerous." "Students don't care about learning. They just care about getting a good grade." The greater the ambiguity, the more likely one is to ignore individual differences and classify all members of the group as being the same.

Ambiguous language can lead to bypassing. Bypassing occurs when people unintentionally use the same word to mean different things or use different words to represent the same thing. Problems of bypassing are much more likely to occur when we use ambiguous language, because there is really no way of checking the accuracy of the term against the actual event it is being used to describe. For example, "I don't know why I got sick, I only had 'a little' to drink." To one person "a little" might be one drink, but to another person it may be a six-pack. This always reminds me of the student in my class who would ask me if they could leave class "a little early." After saying yes, I was surprised to see them leave after the class had been in session for only about 15 minutes. Their idea of "a little early" and mine were very different.

Providing greater language precision is generally considered an advantage in the argumentative environment. Greater precision provides a sense of better understanding about what a person means. Precise words work to avoid misunderstanding between sender and receiver. The best communicative stance is to say what you have to say by using as precise language as you can, taking into consideration: time, place, person and occasion.

Loaded Words: How Language Shapes the Gun Debate

NPR Blog February 2, 2013

Words do more than just describe the world. They literally define it.

They shape and frame it. "Most people don't understand this," says linguist George Lakoff of the University of California, Berkeley. "Most people think that words just refer to things in the world and that they're neutral. And that's just not true."

Lakoff has written many books about this idea. "English does not just fit the world. English fits the way you understand the world via your frames," he says. "And in politics they are morally based frames."

Decades ago, pollster Frank Luntz helped Republicans figure out the power of words. He showed them that voters are more likely to oppose the estate tax if it's called a "death tax." He found that Americans like oil drilling more if it's called "energy exploration."

"The phraseology determines the context. And the context determines success or failure," Luntz says.

Then, there's "reform." Ben Zimmer, executive producer of the Visual Thesaurus, says politicians of both parties tack that word onto any effort to change a program — from tax reform to immigration reform." 'Reform' is one of those terms that is very charged and helps to present one's own position as something positive — a way of advocating change in a positive light,"

http://www.npr.org/blogs/itsallpolit...882077/loaded- words-how-language-shapes-the-gun-debate

Reference

1. Lutz, William. Doublespeak. Brooklyn: Recorded Books Inc., 2016

2.11: Impact of Language on Argumentation

What is the overall impact of language usage on the critical thinking environment? In his book, PERSUASION: THEORY AND PRACTICE, Kenneth Anderson says that language and persuasion are related in three ways[1], and I have added the fourth.

1. **Language is related to audience attention and comprehension**. Anderson says, *"In the attention process, language should be used to select and direct attention toward desired elements. Hence, a style that draws attention to itself and away from content generally mitigates against success. Proper word choice is the key to comprehension. Critical thinkers need to keep two questions in mind: What language will your audience accept, and what language will they reject?"*
2. **Language is related to audience acceptance and rejection of an argument.** Anderson continues, *"To the degree that the attention and comprehension of an audience contribute to an argument's acceptance, language that maximizes these processes increases the potential for acceptance. As tools of communication, meanings that words stir up are related to all the factors in the surrounding matrix; words do not carry the whole burden. The right word is dependent upon the potentialities in language choice. The right word also depends upon the potentialities of the receivers. The perfect word for the sender may be meaningless to the receivers."* You are trying to avoid the "I wish I hadn't said that" syndrome. There is no magical way of unsaying something that you really didn't want to say in the first place.
3. **Language affects arguer credibility**. Word choice and selection, along with usage, is viewed by the audience as a function of class and education. The better the word choice, the more appropriate the word selection is to time, place, occasion, topic and audience, the more credibility the arguer will have.
4. **Language determines how people interpret their environment**. Linguist, Sapir suggests, *"Language is a guide to 'social reality.' Language powerfully conditions all our thinking about social problems and processes."* [2] Critical thinkers need to select appropriate language symbols to match desired thoughts if they want receivers to come close to decoding a message as they encoded it. The words we select and use as representations for people, events, things and ideas, provide receivers with a reasonable basis for interpreting a message.

Reference

1. Anderson, Kenneth. Persuasion: Theory and Practice. BOSTON: American Press, 1983
2. Davis, Alan and Catherine Elder editors. The Handbook of Applied Linguistics, Malden Ma. Blackwell Publishing Ltd. 2004. pg 237

2.12: One Last Thought On Language

We often hear the term, “Political Correct Language” which has been thought of as a form of Ambiguous language. On one hand, it reduces words and terms that can be interpreted as offensive, and damage the exchange between people. But on the other, are we reducing the way we can describe and think about ideas? Is this similar to 1984?

2.13: Your Communication Style

Although you might speak the same language as another person, you still have a style of communication that may differ from another. In fact, this difference in style might be a source of conflict between you and someone else. It would be useful then to better understand your style of communication and the challenges you might have communicating with the styles of others.

There are a variety of approaches of communication styles that relate to a person's personality. The approach described here actually has its beginnings in ancient times with Hippocrates some 400 years B.C. He thought that that people could be classified into four groups dependent on the balance of body fluids that he felt influenced a person's personality. This approach evolved through the years to the version described below.

The key to understanding the four types is the understanding if a person is better at using information and data and are they introverted or extroverted. Take a look at the descriptions of the four styles and think about which one best fits you.

2.13.1: "Screech Owl" by Scott Foresman is in the Public Domain, CC0

Analytic/Owl

Information and Introverted

"Systematic"

The **Wise Owls** are both indirect and controlling. They are concerned with analytical processes and are persistent, systematic problem solvers and generally well organized. If they say they are going to call you back, they will. They are list makers. They are always asking questions in order to get more information. Owls can be seen to over analyze a situation so much that they delay decision making and suffer from "paralysis by analysis." They can appear as aloof, picky, and critical.

Pace: Owls actions and decisions tend to be slow and extremely cautious, but they will rarely miss a deadline.

Theme: "Notice my efficiency."

Motto: "Better safe than sorry."

Strengths: Accuracy, dependability, independence, follow-through, and organization

Weaknesses: Their procrastination and conservative natures, which promote their tendency to be picky and over-cautious

If you are an owl and want to be a more effective communicator, you need to openly show concern and appreciation of others instead of relying solely on information. Occasionally try shortcuts and time savers.

2.13.2: "Bald Eagle" by Scott Foresman is in the Public Domain, CC0

Driver/Eagle

Information and Extrovert

“Direct”

Eagles respond quickly and focus on decisions. They are controlling and direct without major considerations of others personal feelings. They are oriented toward productivity and goals, and are concerned with bottom line results. If they have an office you would probably see their awards on the wall.

Pace: Eagles are fast-paced and make decisions quickly.

Motto: “I want it done right and I want it done now,” or,” I want it done yesterday!”

Theme: “Notice my accomplishments.”

Strengths: Their ability to get things done, their leadership, and their decision-making ability

Eagles accept challenges, take authority, and go head first into solving problems. They tend to exhibit great administrative and operational skills and work quickly and impressively on their own.

Weaknesses: They tend to be inflexible, impatient, have poor listening habits and fail to take time to “smell the flowers.” If they did, they would return to others and say, “I smelled 12 today. How many did you smell?”

If you are an Eagle and you want to improve your ability to communicate with others, you need to practice active listening and develop patience, humility, and sensitivity. Eagles also need to show concern for others, use more caution, verbalize the reasons for their conclusions, and participate more as team players.

2.13.3: "Peace Dove" by Unkown is in the Public Domain, CC0

Amiable/“Dove”

Relationships and Introvert

“Considerate”

The **Diplomatic Dove** is the most people-oriented of all the four styles. The Dove is supporting and indirect, relatively unassertive, warm and reliable. They really seek a peaceful, stable environment. Doves are sometimes seen by others as compliant, soft-hearted, and agreeable. They happily go along with others. They seek security and will be very uncomfortable with change. Having close, friendly, personal, and first name relationships with others is one of their most important objectives.

Motto: “Is everyone comfortable?”

Theme: People and their feelings are most important.

Pace: They take action and make decisions slowly. Doves wish to avoid risky or unknown situations. Before they take action or make a decision, they have to know how other people feel about their decision.

Strengths: Relating to, caring for, and loving others

Doves have natural counseling skills and are extremely supportive. They focus on getting acquainted and building trust.

Weakness: They are somewhat unassertive, overly sensitive and easily bullied.

If you are a Dove and want to achieve communication balance and behavioral flexibility you need to say “no” occasionally. You need to be more assertive in order to achieve your needs. Attend to the completion of tasks without being over sensitive to the feelings of others. Take a chance and be willing to reach beyond your comfort zone to set goals that require some stretch and risk. And don’t feel guilty about delegating tasks to others.

2.13.4: "Roadrunner" by Unkown by Pixabay

Expressive/Road Runner

Direct Communication Style and Support/People focused

“Spirited”

The **Social Road Runners** are direct, supporting, and lively and effective communicators. Their actions and decisions are fast-paced and spontaneous. They have a disregard for details which causes them to make mistakes, exaggerate, and generalize facts and figures. They often over commit themselves in order to please others. They are easily distracted by new ideas and projects and have a challenge completing projects so they sometimes are not the best people to be relied on. They can be viewed as excitable and manipulative. They work quickly and enthusiastically with others.

Pace: Road runners are fast paced and make decisions quickly.

Motto: “Don’t confuse me with facts.”

Theme: “Ain’t we got fun.”

Strengths: Enthusiasm, persuasiveness, and their delightful sociability

They are idea persons and can influence others and shape their environment by bringing others into alliance to accomplish results. They have a dynamic ability to think quickly on their feet.

Weaknesses: Getting involved in too many things, impatience, and their short attention spans which cause them to become bored easily. Their fast-paced actions lead to mistakes.

To improve their communication, Road Runners need to control their time and emotions; develop a more objective mindset; spend more time checking, verifying, specifying, and organizing; develop more of a task-focus; and take a more logical approach to projects and issues.

A key thought here is that within us we actually use all four of these communications styles. But, there is usually one style that we are more comfortable using and if we could, that would be the style we would most frequently use. We usually also have a secondary style that we may occasionally lean towards. A situation may occur that makes one style more effective than another and so you switch to that style. You might be a relaxed “Amiable” person, but as a parent, you might have to switch to a “Driver” to get a point across to your children. The more flexible you are in your styles, the more situations you can be effective.

As you might notice, if you are an “Amiable Dove” that cares about the people in your office with and you are working with a “Driver Eagle” who’s focus is on the end results, you can easily see the possibility of conflict. Understanding the differences between these styles can be a great start at resolving conflict.

Critical thinkers have to take the language needs and requirements of their audience into account when trying to persuade them in an argument to adopt a particular point of view.

Understanding the effects of language on the critical thinking and argumentation process reduces the chances of being manipulated by others.

2.14: The Focus of This Chapter

In this chapter I wanted to focus on how language affects the way we think and argue. The imperfections of communication and influences of language directly impact the way we argue and think.

There were four key aspects of language on critical thinking included in this chapter:

- **We do not argue in a vacuum**. To disagree with others, we need to communicate. And here begins the challenge. It is impossible not to communicate and yet perfect communication is impossible. Expressing our thoughts clearly in a manner others can understand them can be challenging.
- **Both the grammar of the language and our vocabulary guides the structure of our thinking**. As Wittgenstein stated, “Like everything metaphysical the harmony between thought and reality is to be found in the grammar of the language.”
- **We can use language to manipulate others**. Words have both a specific meaning and an emotional meaning. There may be no difference between a sanitation engineer and a janitor, but doesn’t one sound better than the other? Using words with predictable emotional meanings are very effective manipulative tools.
- **We all have a preferred Communication Style**. Differences in these styles can be a source of conflict. Understanding our styles and the styles of those around us can improve our communication and make sure our conflicts are more substantive not just style.

In this chapter I wanted to focus on how language affects the way we think and argue. The imperfections of communication and influences of language directly impact the way we argue and think.

Critical thinkers have to take the language needs and requirements of their audience into account when trying to persuade them in an argument to adopt a particular point of view.

Understanding the effects of language on the critical thinking and argumentation process reduces the chances of being manipulated by others.

CHAPTER OVERVIEW

3: Clash

3.1: Responding to an Argument

Your long time romantic partner comes to you and says, "*You don't love me anymore*." You just stand there. Stunned. Too startled to speak. Hearing you not say anything your partner turns around walks away saying, "*That's what I thought*."

What just happened? By you not answering, your partner assumed you agreed with the statement. Your failure to engage in an argument implied that you had nothing to contradict the statement. Your failure to clash led to the belief that you agreed with the statement, thus no argument.

If you do disagree with someone's statement, you need to learn how to clash with him or her.

3.1.1: "Portrait of Sir Thomas More" (Public Domain; Hans Holbein the Younger via Wikimedia Commons)

If we look at this interaction through the lenses of this text, your partner is considered the pro-side, because they have made the claim that you don't love them. They have presented their argument which in this case is just the statement of the claim "*You don't love me.*" You, the con-side, must now respond or else the pro-side's position is upheld automatically. Why?

"Silence means consent**"**

> *The maxim is* Qui tacet consentiret*: the maxim of the law is* "Silence gives consent".
>
> *– Sir Thomas Moore*

There is a famous maxim that states, "*Silence means consent.*" That is if the pro-side makes an argument and the con-side says nothing, the implication is that the con-side agrees with the pro-side. There is no controversy, thus no argument.

I was writing a letter that was going out to all the members of an organization to which I belong. I sent out a final draft to the nine committee members for one last check. I heard from three of them. I did not hear from the other six members so I reasonably assumed that they had no objections.

Now I agree that in a social situation, silence could mean that the person is merely tired of arguing. They still may not agree, but they no longer want to spend the time or energy fighting. In a structured argument, however, it is important for those who disagree to fulfill their responsibility and respond to the initial argument. If not, then the argument is over.

Clash occurs when there is a disagreement. In an argument, responding to the pro-side is referred to as clash. When the pro-side presents their argument and the con-side says nothing, there is no clash. Only when the con-side makes their argument against the pro-side then clash occurs and we have a genuine argument.

3.2: Skepticism

Our first step involves being skeptical of new ideas and arguments. When someone tells you something or you read it over the internet or see it on television, are you more likely to believe it or disbelieve it? As long as it does not clash with previous beliefs we hold, science suggests that we are more likely to accept new information. In fact, in order to understand a new concept our minds must first accept the concept to even understand what it means.

In a landmark 1991 paper, Harvard psychologist Dan Gilbert proposed that we process information in two steps. First, we accept information as true, and then we interrogate whether it may actually be false. In other words, we let the Trojan horse past the gate before we check to see if it's full of Greek soldiers. "Humans," wrote Gilbert, are "very credulous creatures who find it very easy to believe and very difficult to doubt."

Cognitive Science Offers Tools To Rebuff Climate Deniers [1]

As Dan Gilbert argues, understanding a new idea requires two steps.

- Accept that the new information is accurate to understand the new ideas.
- Once the ideas are understood, then test them to see if they are accurate.

Silence Does Not Always Mean Consent, Especially in Romance

Silence means consent is not an actual legal term and should not actually be relied on for all situations. This is especially accurate when "romance" is involved. More and more social situations, however, demand that if romantic advances are being made by an individual, that person must receive an affirmation of those advances before the romance is continued. Silence here does not mean consent.

But as you might imagine, once we accept the accuracy of a concept it becomes a challenge to then reject it. Since we are naturally prone to accept new information, our human nature is not to be initially skeptical. Being skeptical is a skill we must develop.

Our skepticism skill is challenged even more when we are presented with many "lies." Again, **Jeremy Deaton** writes:

- Human brains are built to ward off singular untruths, but we struggle against an army. When faced with an onslaught of lies, our defenses falter, letting alternative facts slip past the barricade. There are several reasons why this is the case. Here are three:
  - It takes energy to scrutinize a lie.
  - It takes more energy to scrutinize it when we hear that lie again and again.
  - We don't like to scrutinize a lie that supports our worldview.[2]

There is a misconception over what it means to be skeptical and I am guessing that now is a good time to clearly define what it means to be skeptical. **Michael Shermer** is the publisher of Skeptic magazine and is frequently asked what it means to be a skeptic. He answers this question by saying,

As the publisher of Skeptic magazine, I am often asked what I mean by skepticism, and if I'm skeptical of everything or if I actually believe anything. Skepticism is not a position that you stake out ahead of time and stick to no matter what.

...science and skepticism are synonymous, and in both cases, it's okay to change your mind if the evidence changes. It all comes down to this question: What are the facts in support or against a particular claim?

There is also a popular notion that skeptics are closed-minded. Some even call us cynics. In principle, skeptics are neither closed-minded nor cynical. We are curious but cautious.[3]

This passage by Shermer points out **four key thoughts about skeptics:**

- No position is staked out ahead of time. This allows for you to examine the argument with an open mind and then decide whether you accept it or reject it.
- Skepticism follows the procedure of scientific inquiry looking to see if the evidence provided in the argument adequately supports the claim.
- It is okay to change your mind. You may have one position, but after listening to a new argument, with new and additional evidence you can now make a better decision and actually changing your mind is a good thing.
- Skeptics are not cynics. Instead Skeptics are curious, but are cautious and resist leaping to a comfortable conclusion.

An additional and often used method of learning a concept is to look at the origin of a word. For those of you who want to impress your friends, the term for this is *etymology*. The *Basics of Philosophy* website has a nice, brief examination of the term skeptic.

> *The term is derived from the Greek verb "skeptomai" (which means "to look carefully, to reflect"), and the early Greek Skeptics were known as the Skeptikoi. In everyday usage, Skepticism refers to an attitude of doubt or incredulity, either in general or toward a particular object, or to any doubting or questioning attitude or state of mind. It is effectively the opposite of dogmatism, the idea that established beliefs are not to be disputed,doubted or diverged from.*[4] *(Maston,2008)*

I like the idea that this passage clearly states that being a skeptic is the opposite of being dogmatic.

Jamie Hale describes the difference between being cynical and being a skeptic.

> *"Cynics are distrustful of any advice or information that they do not agree with themselves. Cynics do not accept any claim that challenges their belief system. While skeptics are open-minded and try to eliminate personal biases, cynics hold negative views and are not open to evidence that refutes their beliefs. Cynicism often leads to dogmatism."* [5]

He continues by stating that dogmatism "opposes independent thinking and reason." If we want to be successful critical thinkers we need to become much more skeptical and less cynical.

In his TEDTalk Michael Shermer explains the relationship between the process of skepticism and science.

3.2.1: "Photo of Michael Shermer" (CC BY 3.0; Loxton via Wikimedia Commons)

Skeptics question the validity of a particular claim by calling for evidence to prove or disprove it. In other words, skeptics are from Missouri -- the "Show Me" state. When we skeptics hear a fantastic claim, we say, "That's interesting, show me the evidence for it."[6]

A key goal here is to encourage you to be more skeptical. Instead of blindly accepting or rejecting claims made by others, take the time to demand proof. Make the person or organization prove the claim they are making. And remember, you need to be open minded when listening to the argument.

Over three centuries ago the French philosopher and skeptic René Descartes, after one of the most thorough skeptical purges in intellectual history, concluded that he knew one thing for certain: "Cogito ergo sum" — "I think therefore I am."

By a similar analysis, to be human is to think. Therefore, to paraphrase Descartes: Sum Ergo Cogito —I Am Therefore I Think [7]

An effective critical thinker who is successful in arguing is a person who is more skeptical of the messages they receive. This advice is not just for those who wish to be argumentative. This advice is for every citizen.

> *"What we all need, as citizens, is to develop more skill in applying our skepticism. We need to spot false narratives, and also turn aside those who would replace them with pure fiction. Either we get this right or we cease to be free citizens."* [8]

The problem we all experience is that it is not natural to be skeptical. Our natural state is to either flee a conflict or stand and argue. This can be explained by how our brains are structured.

Reference

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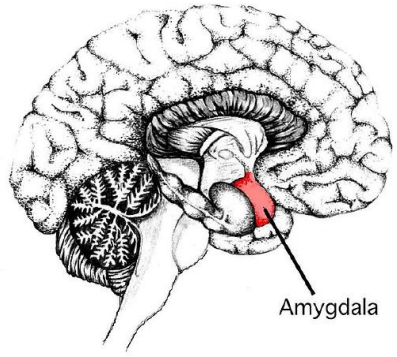
3.3: Fight or Flight?

All of your information from your senses goes first to a part of the brain called the Thalamus. We call the thalamus the "flight control center" of the brain. It takes in all of your senses, your hearing, sight, touch and decides how to route the messages it is receiving. One route takes the messages to the cerebral cortex, where our skill in decision-making allows us to contemplate alternatives and make a decision. But if the thalamus is triggered by more intense perceptions, the message goes straight to the Amygdala for action.



3.3.1: "Amygdala" (Public Domain; Sgerstenberg via Wikimedia Commons)

We all have an emotional brain that resides in the limbic system, located on top of the brain stem and buried under the cortex. When faced with the stress of an argument, your first reaction is a physical one that begins in an almond sized organ towards the bottom of your brain, called the amygdala. This organ actually keeps a record of your past dangerous experiences and strives to protect you from future harm. As soon as this organ perceives danger, it sends a distress signal to the hypothalamus.

You are taking a nice stroll outdoors when suddenly a snake slithers up on the path in front of you. Emotions are triggered. Oh no, this snake might strike and kill me. Do I stay and defend myself, or flee? You are experiencing, *Fight or Flight.*

This just doesn't happen out in the wilderness. It can also happen at work. Your boss is looking for you to assign you a major project. Emotions are triggered, "Oh no I can't do this," or "My boss is trying to kill me." Immediately you think, "I am going to stay and tell him that I can't do this." Or "Where can I hide?" This is Fight or Flight.

When the thalamus becomes aware of an emotionally charged perception, the amygdala is sent that perception. Snake! Or Project! Your amygdala has access to your memory and quickly relates the current situation to one of those past memories so it can immediately act. Only later will it look to the logical part of the brain for alternative reactions.

The amygdala swings into action. Immediately:

- Past memories of similar situations are examined
- Adrenaline is pumped into the body which prompts quicker physical reaction
- A surge of energy is experienced
- Stress hormones are activated
- Your pain threshold gets higher

These processes are so intense it may take you 20 minutes before you can get these emotions under control and allow the more logical part of the brain to take over and help with the decisions. This, by the way, explains read rage and why we should wait until the next day to respond to an email that has angered us.

While in this condition, you lose the ability for in depth thinking. The amygdala does not want you to look curiously at the snake and wonder, *"What type is it?"* No, it recognizes potential danger and is preparing you for survival. If you have ever had a stressful situation and then asked yourself afterwards, *"What was I thinking?"* The answer is, you weren't. The brain was preparing you for your "fight or flight" mode and not allowing you to really think. There is no time to think. This is also an explanation for why we often think of something very witty to say to someone, after they have left.

If the situation is so emotionally charged, like a snake or project, then the emotions may totally take over your thoughts and reactions, creating a condition called *"emotional hijack."* A way of expressing emotional hijacking is road rage. The impact of the

perception is so strong that the emotions take over. Logic does not enter into it. Think about the time your partner did something that finally was the proverbial “last straw” or someone you may be supervising made the same mistake for the tenth time. Did you make an outburst that you now wish had been handled in a different way? All of this happens, before the rational part of our brain, the cerebrum, is asked for guidance.

Now, if we can get the amygdala under a bit of control, our cerebrum is notified of the danger and we now have a chance to think of alternative actions. Instead of just responding with the first reaction that occurs from our memory, we now have the opportunity for more in depth thinking.

A very useful formula to remember is **E + R = O.**

- **“E”** stands for Event and refers to some action that has happened to you.
- **“R”** stands for either Reaction or Response. Reaction is our quick, unthinking answer to an action while a Response is more of a thought our answer where we look at alternatives and select the best one for us in that situation.
- **“O”** stands for Outcome.

We can't always control the Event that happen to us, but we can create more desirable Outcomes if we Respond to a situation instead of just Reacting to it.

I find it very interesting that your brain gets you ready to either fight a perceived danger or flee from a perceived danger. Even before you are totally aware of the threat, you are in that state of fight or flight. Do you flee or stay and fight? I am hoping that this text will give you the skills to stay and fight in arguments and not flee from them. There are certainly a variety of ways to disagree with someone.

3.4: Ways to Disagree

When we arrive at a point where we disagree with the claim being made, we find that there are several ways we can respond. In his essay, *How to Disagree*, Paul Graham describes a hierarchy of seven ways a person can respond to an argument. Here is his, list starting with the most basic way people react to a disagreement and working up to a more academic method of arguing.

- **Name Calling** – Totally ignoring an argument and instead just calling the person issuing the argument an unwelcomed name. You probably did this as a small child to your siblings or playmates.
  - Example: "*You're just crazy.*"
- **Ad Hominem** – Attacking specific aspects of the source of the argument without referencing any aspect of the actual argument.
  - Example: "*You don't have a college degree, what do you know?*"
- **Responding to Tone** – Attacking the tone of the argument, instead of and of the actual content of the argument.
  - Example: "*Wow, your tone is way over the top, don't you think?*"
- **Contradiction** – Disagreeing by just stating an opposing side, with virtually no actual evidence to support this presented argument.
  - "*No I didn't"* or "*You're wrong, basketball is a better sport than football."*
- **Counterargument** – Contradicting the initial argument, but also backing it up with reasoning and evidence. This is an actual argument and what the author, Graham, considers the first form of a convincing disagreement.
  - "*No, the death penalty does not deter crime. In Ohio when they initiated the death penalty, crime actually increased.*"
- **Refutation** – Here instead of making a unique counter argument, a mistake in the initial argument is found, and an explanation of that mistake along with evidence and reasoning is presented. Here no new argument is made; we are just finding the weakness in the initial argument.
- **Refuting the Central Point** – Explicitly refuting the main point of the initial argument. Instead of refuting some of the supporting parts of an argument, here we focus on the key, central point of the initial argument.[1]

Reference

1. Graham, Paul. "How to Disagree." *PaulGraham.com*, http://www.paulgraham.com/disagree.html. Accessed 30 October 2019.

3.5: Two Sides to an Argument

There are two sides to every argument. The two sides are called the pro-side and the con-side. The pro-side will speak in favor of the topic of the argument or what we call the claim being made, while the con-side will be speaking against the claim being made in the argument. There is no third position of an argument like, "*I don't know*." You are either for or against the claim. When you clash against an argument you are taking the con side of the argument.

A discussion is different. In a discussion, you can have a variety of different opinions on a topic. But when you get to the point of deciding on a particular answer, you have an argument. To better understand this, we need to look at the structure of the argument. And to do that we need to go back 2500 years to the Greek foundation for argumentation.

Enthymemes and Syllogisms

We often argue in what the Greeks referred to as an *enthymeme*. There are two parts to this type of argument, an observation that leads to a conclusion. Examples of an enthymeme could include:

- Ernie is going to be a violent person because he plays violent video games.
- If Terri exercises often she will be healthy.
- Vote for John Doe, he won't raise taxes.
- Bill Gates is brilliant because he started Microsoft.

This list of arguments contains an implicit assumption. For example*: "Ernie is going to be a violent person because he plays violent video games" implies that "people who play violent video games become violent people."* These general assumptions are left out in many, many arguments. The person making the argument assumes that you will just accept the general assumption. The Greeks decided to add this assumption as the third part of their argumentative analysis.

To expand the argument the Greeks used a format called the ***syllogism***. This format is a form of deductive reasoning that starts with two initial propositions that lead to a conclusion. The initial proposition is the assumption implied in the enthymeme.

All professors are brilliant.

Jim Marteney is a professor.

Jim Marteney is brilliant.

First note that the name of any professor could be placed here.

As accurate as we might like the conclusion to be in this argument, what if we found one college professor that was not brilliant? This Greek style of argumentation was an all or nothing approach. The argument was either 100% valid, or 0% valid. Classical Greek argumentation would suggest the entire argument is invalid and we could never make any conclusions.

But, in critical thinking we would argue that if there is just one example of a professor who is not brilliant there is still a high degree of validity, or probability, that the conclusion is still accurate. The argument may still be valid enough to reach the threshold of the target audience to accept the claim. In critical thinking, we make decisions when an argument reaches our threshold. The threshold does not have to be absolute 100%. Even in a court case that threshold is "Beyond a Reasonable Doubt" and not "Beyond any Doubt" which is less than 100% certainty.

This realization was the basis for Dr. Toulmin's approach to analyzing arguments.

3.6: Toulmin Approach to Argument

In order to determine the most effective strategy to respond to a case, the con-side of an argument needs to analyze the argument to discover the strengths and weaknesses of the pro-side. The Toulmin Model gives us an effective tool to successfully clash with the pro-side.

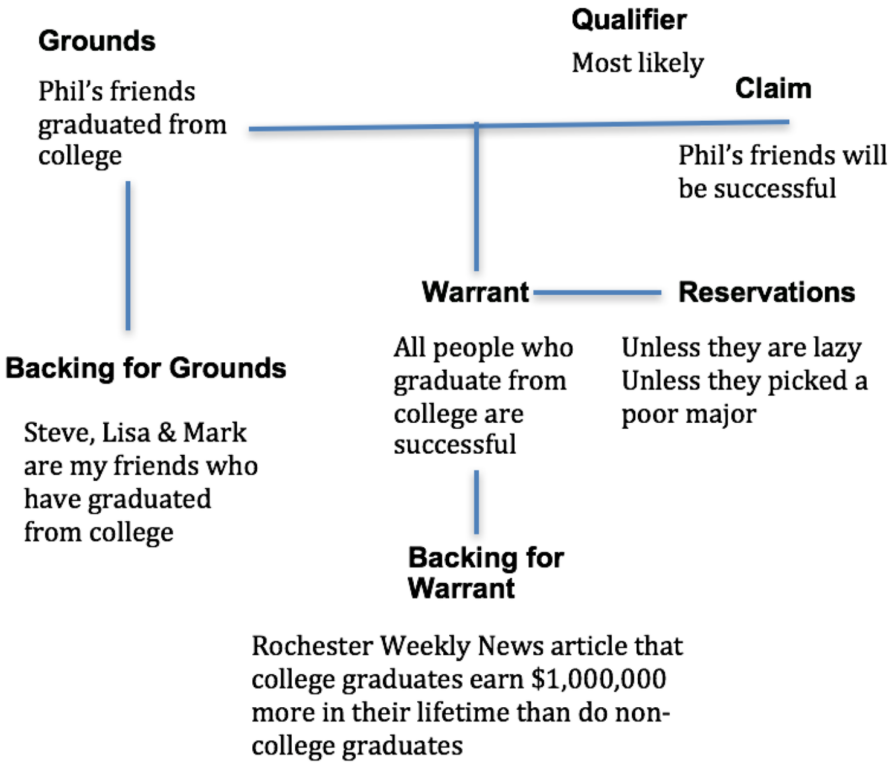
Stephen Toulmin was one of the modern-day leaders of rhetorical theory. He looked at the classical structure of arguments, and found a problem. The conclusions of the classical approaches to arguing needed to be absolute. That is, the conclusions of a correctly structured argument were either absolutely, 100% valid (true) or absolutely 0% invalid (untrue). There were no grey areas.

In his work on logic and argument, *The Uses of Argument (Toulmin, 2008)*, Toulmin defines six parts that make up an argument:

- Claim
- Grounds
- Warrant
- Backing
- Reservations (rebuttals)
- Qualifier

In this approach he breaks down an argument into its component parts to demonstrate the degree of confidence you should have in the argument. Analyzing the argument allows the con-side to determine the strengths and weaknesses of the argument, so a counter argument can be effectively delivered.

Here is a simple argument that is diagrammed using the Toulmin approach.



3.6.1: "Sample Toulmin Model" (CC BY 4.0; J. Marteney)

- **Claim:** This is the main point or thesis of the argument. This is what the pro-side is attempting to convince you of or trying to prove. If the claim is not directly stated, just ask, "What is the pro-side trying to prove?" In the sample argument, the conclusion, the claim you are attempting to prove is that "Phil's friends will lead successful lives."
- **Grounds:** Here is the starting point of your argument that leads to your Claim. This is what you have observed, read or what you believe to exist. In this sample argument, the grounds are that "Phil has several friends who have graduated from college."
- **Warrants:** This is the overall logical underpinning of the argument. A general rule that can apply to more than one Grounds. The Warrant can be a universal law of nature, legal principle or statute, rule of thumb, mathematical formula, or just a logical

idea that appeals to the person making the argument. Warrants usually begin with words like; all, every, any, anytime, whenever, or are if-then, either-or, statements. The Warrant is a general rule that has no exceptions. Those come later

  - Warrants are important because they provide the underlying reasons linking the claim and the grounds. You can infer the warrants by asking, "What's causing the advocate to say the things he/she does?" or "Where's the advocate coming from?" In our example argument, the warrant is that "All people who graduate from college are successful." No exceptions.

- **Backing:** Backing is the specific data, which is used to justify and support the grounds and warrant. In Toulmin's original work, he only includes Backing for the Warrant. I am adding Backing to also look at the quality of the original Grounds of the argument. Critical thinkers realize that there must be backing for their statements or they are merely assertions. When clashing with an argument, we need to look at the quality of evidence that supports the initial grounds.
  - In our diagrammed argument, the Backing for the Grounds are the names of the specific friends who graduated from college. The Backing for the warrant comes from an LA Times article that college graduates earn $1,000,000 more in their working lifetime than non-college graduates do. I like to separate the Backing from the Grounds and Backing for the Warrant as they are two different areas that can affect the strength of the argument. Toulmin makes no such distinction.
- **Reservations and Rebuttals:** They are the "unlesses" to the Warrant. Reservations do not change the wording of the warrant. Reservations do not change the "universality" of the Warrant. But Reservations are exceptions to the warrant. These exceptions weaken the validity of the conclusion because the Grounds may just be one of these exceptions, thus meaning that the Claim is invalid. In our example, your uncle has a Reservation to the Warrant. He states that people who get a college degree will succeed, unless they are lazy. The "unless they are lazy" is the Reservation to the Warrant.
  - Note that a Reservation does not refer to a rejection of the Warrant. In this example "Unless they did not graduate" would not be a Reservation because it implies that the Warrant did not happen. Instead a Reservation is a statement that suggests that even though the Warrant took place, the Claim may not occur.
- **Qualifiers:** Suggest the degree of validity of the argument. If there is no Qualifier, then the argument is 100% valid. But if a Qualifier exists then the conclusion is less than absolute. With a qualifier, the argument is about probability and possibility, not about certainty. You cannot use superlatives like all, every, absolutely or never, none, and no one. Instead you need to qualify (tone down) your claim with expressions like; most likely, many, probably, some or rarely, few, possibly, etc.
  - In our sample argument, it is argued that Phil's friends will "most likely" be successful. The "most likely" is the Qualifier.

3.7: Counter Argument Strategies

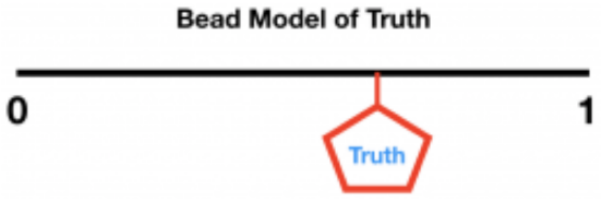
If you are arguing against this claim:

- You might want to add additional Reservations.
  1. Unless there is an economic downturn
  2. Unless they have health issues
- You might want to challenge the backing for the Warrant
  1. You could suggest that earning $1,000.000 over a lifetime would not automatically make you successful.
  2. You could argue that there was a problem with the analysis conducted by the Rochester Weekly News

3.8: No Absolute Certainties

In argumentation, we don't deal with absolute certainty of a claim. The skeptic and scientist both have the attitude that there are no absolute certainties. In other words, there are doubts on each claim that is argued. One scientist, **R. A. Lyttleton**, has described this process as the "Bead Model of Truth." It is important to note here that Lyttlleton does not use the word "Truth" as the absolute "Truth" but instead uses the word "Truth" to represent the validity of a claim.[1]

To understand his model Dr. Lyttleton imagines a bead on a horizontal wire. The bead can move left or right on that wire. On the far-left side of the wire is the number which corresponds to total disbelief. On the far-right hand side of the wire is the number 1 which is related to a position of total belief or where you would believe the claim with absolute certainty.



3.8.1: "Bead Model of Truth" (CC BY 4.0; J. Marteney)

Dr. Lyttleton would argue that the bead should never reach the far left or right end. As additional evidence is presented the belief is true the closer the bead moves to the number 1. The more unlikely the belief is to be accepted the closer the bead moves to 0.

According to **Toulmin**,

> "Any claim is presented with certain strengths or weakness, conditions, and/or limitations. We possess a familiar set of colloquial adverbs and adverbial phrases that are customarily used to mark these qualifications. Such adverbs are: presumably, in all probability, so far as the evidence goes, all things being equal, for all that we can tell, very likely, very possibly, maybe, apparently, plausibly, almost certainly, so it seems, etc. All of these phrases can be directly inserted into the claim being advanced, and as a result, would modify the claim indicating what sort of reliance the supporting evidence entitles us to place on the claim." [2]

Let's go back to the "**Jim Marteney is brilliant**" syllogism. Below is how Dr. Toulmin would analyze the argument. Now you can ask questions about the parts of the argument that are blank, the backing, reservations and qualifier.

3.8.2: "Second Sample Toulmin Model" (CC BY 4.0; J. Marteney)

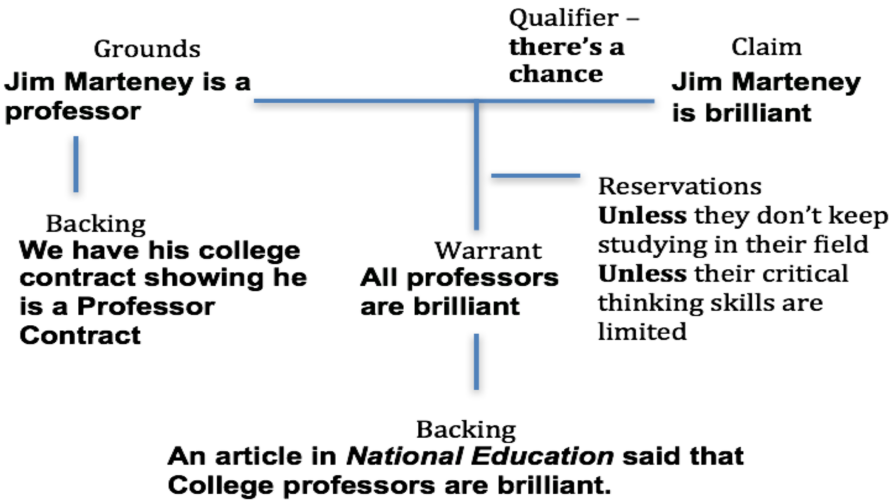
The argument as presented is 100% valid because there are no Reservations leading to a Qualifier. There is also no Backing presented for the Grounds and Warrant, so at this point they are just assertions.

- Now you begin your analysis by asking questions, or as we will be calling them, Issues. What is the Backing for the idea that all professors are brilliant? Poor backing would create doubt with the Warrant and its ability to be an absolute, general rule.
- Are there any professors who are not brilliant? If so, that could be part of the Reservation? This is where you show your skepticism.

The answers to these questions could damage the argument. If there are Reservations there is a Qualifier. The more reservations, the weaker the Qualifier becomes the Claim becomes less valid. If there are no exceptions the Qualifier is 100% and you would be

100% certain that the Claim is correct. But with a couple of Reservations your Qualifier could be reduced to maybe 80% sure. Now, does that reach your threshold? There is still a degree of validity, but it may not be enough for you to accept the claim.

Examining the quality of the backing of the Grounds and Warrant might lead us to question the accuracy of those statements. With questionable backing the accuracy of the argument is challenged. The weaker the accuracy the less valid is the Claim.
This is what a completed Toulmin might look like.



3.8.3: "Third sample Toulmin Model" (CC BY 4.0; J. Marteney)

With this completed Toulmin analysis of the argument we can immediately see two weaknesses in the argument.

- The publication, *National Education* which supports the Warrant that "All professors are brilliant," might be prejudiced in favor of professors. This weakens the accuracy of the warrant.
- Since there are two Reservations to the Warrant, the Claim cannot be 100% valid. There then has to be a Qualifier that suggests a lower level of validity.

Notice that the Qualifier is now, "There's a chance." This would lead me to reject the Claim that Jim Marteney is brilliant.

This is what defense attorneys attempt to do in a courtroom. They don't have to prove that their client is innocent. They have to attack the prosecution case to reduce the validity of the Claim that their client is guilty. They want the Qualifier to reflect a low number by questioning the backing and adding more and more examples to the Reservations. If in a criminal case they can reduce the validity to below reasonable doubt, the jury should find their client "not guilty." Notice they don't say the accused is "innocent." They can only say that the prosecution did not have a valid enough case for them to find the accused guilty.

Stephen Toulmin developed this model for analyzing the kind of argument you read and hear every day--in newspapers and on television, at work, in classrooms, and in conversation. The Toulmin Model is not meant to judge the success or failure of an attempt to prove an argument; instead it helps break an argument down to its most basic pieces. The Toulmin Model helps to show how tightly constructed arguments are, and how each part of an argument relates to the overall validity or reasonableness of that argument.

Reference

1. Hale, Jamie. "Limitations of Science." *PsychCentral*, https://psychcentral.com/blog/the-limitations-of-science/. Accessed 30 October 2019.
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3.9: Arguing from the Con-Side

The con-side is the side rejecting the acceptance of the persuasive goal. They are arguing against the Claim by maintaining that we should stay with the status quo, or current system. Assume the Claim being argued is:

- **Resolved: The State of California should eliminate capital punishment.**

The goal of the con-side is to demonstrate the weaknesses or problems with the change from the status quo to this new policy, and why we should maintain the current capital punishment position. The con-side can win an argument if they just demonstrate there are not enough reasons to change to a new system.

Maintaining the current system is a powerful position. Tradition always suggests that because we have had a certain policy or outlook for so long that there has been some degree of success. So why take the chance and change? Remember, stasis is powerful. We are naturally comfortable with existing ways of doing things and so we argue to continue them. This is one reason why political incumbents have an advantage in an election to be re-elected to office.

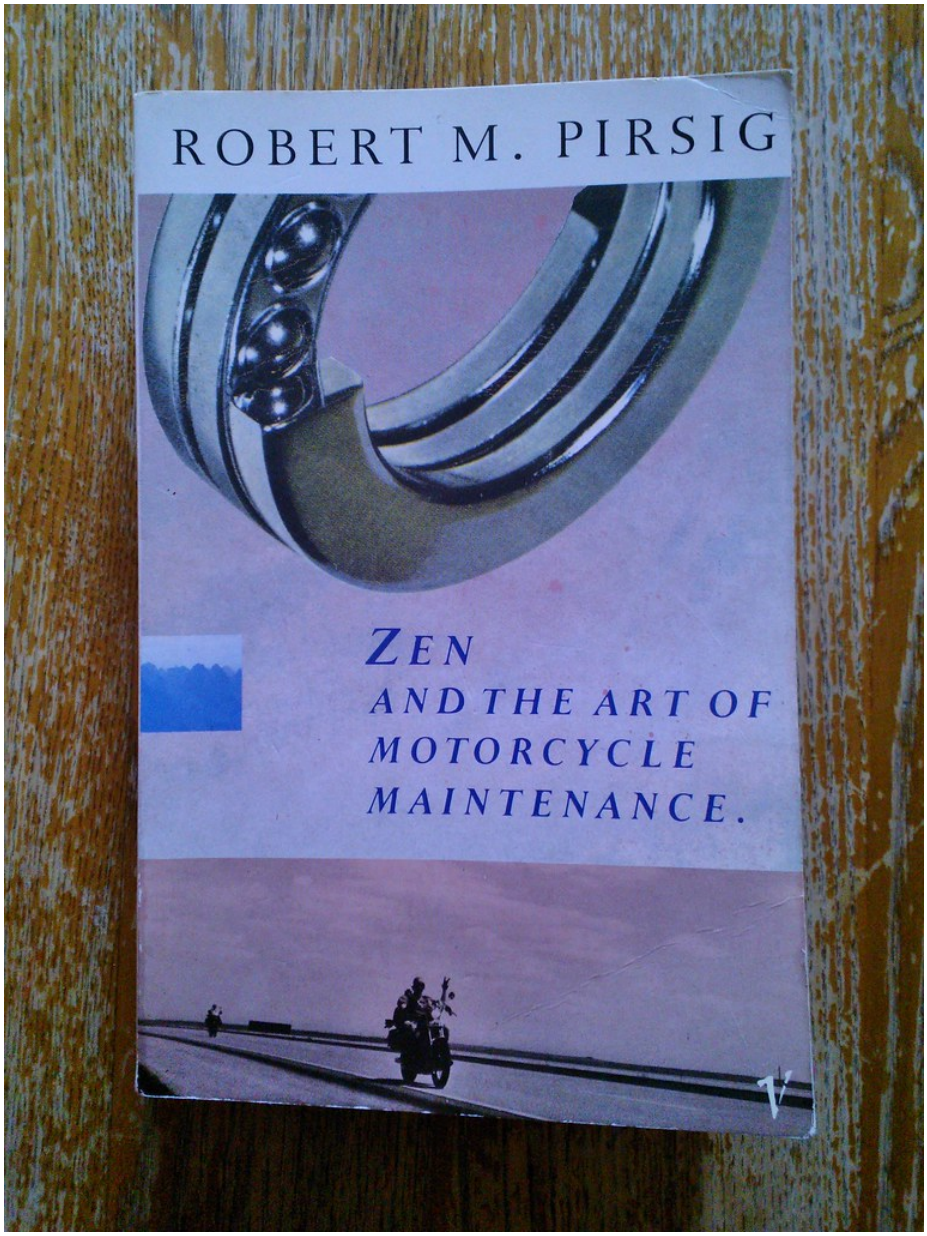
3.10: Using Toulmin To Develop Con Strategies

After analyzing an argument using the Toulmin approach you can begin arguing against that argument. There are two overall con-side strategies when clashing with the pro- side.

Reducing the significance of the problem or potential advantage. The only reason we ever change from something we have been doing is that there is a significant reason to change. This reason may be that there is a problem that is getting worse and worse, or that there may be an advantage out there if we make the change. Currently more than one state legislature is arguing that all social welfare recipients should be tested for drugs before they are allowed to receive welfare payments. The con-side could argue that the problem is not significant to warrant the change in policy and that the status quo should be maintained.

The Scientific Method

> *The real purpose of the scientific method is to make sure nature hasn't misled you into thinking you know something you actually don't know."*
>
> *--R.Pirsing Zen and the Art of Motorcycle Maintenance*



3.10.1: "Zen and the Art of Motorcycle Maintenance by Robert M Persig" (CC BY-NC-SA 2.0; Tony Roberts via flickr)

This goal then is to weaken the impact of the contentions and thereby the certainty of the Claim is lessened. Those involved grow more skeptical of the Claim. The hope of the con-side is that the certainty of the Claim will fall below the threshold needed to accept the Claim. At this point, the Claim will be rejected and the con-side will win the argument.

The pro-side solution will not solve the problem they intend to solve. The con-side argues that the Claim argued by the pro-side will not work, or in some cases may make the problem even worse. Clashing against the argument that the state should drug test welfare recipients, the con-side may say that the test is not accurate and makes too many mistakes or false positives. They may also talk about how many ways there are to cheat the test. If the con-side can demonstrate that that the pro-side solution cannot work, then the Claim should be rejected.

3.11: Creating A Counter Argument

Once we have determined the strengths and weaknesses in the argument by effectively using the Toulmin Model, we can create our counter argument and begin our clash.

In the Toulmin analysis that concluded that Phil's friend will be successful, two possible counter arguments reveal themselves. One argument can focus on the backing for the Warrant, while another looks at the Reservations.

The Backing for the Warrant "that all who graduate from college will be successful" is from the Rochester Weekly. The con-side might question the quality of that source. How did they determine that conclusion? If the con-side can demonstrate a problem with the Warrant, the entire argument is invalid.

A second con-side argument might be with the reservations. The more significant the reservation that exists, the more of a chance that the instances described in the grounds might apply to those reservations. Maybe Phil's friends are lazy or picked a poor major. There might be additional reservations like they live in an economically depressed area with few employment chances. The more Reservations to an argument, the less valid is the Claim.

Note

An argument is not merely denying the claim. Just denying the claim is what we might call "squabbling" or "bickering." It is not an argument. For clash to be effective you need to explain **why the claim should be denied**.

Note 2

The con-side does not have to create a counter argument. If they can find problems with the pro-side's case, they can weaken the validity of the argument to the point where it rests below the Threshold needed to win approval. And thus, the con-side wins the argument.

3.12: Con side Case Alternatives

To accomplish the two, overall con-side strategies the con side can select one of the following alternatives.

Straight Refutation

In straight refutation, the con-side directly refutes, point-by-point, the arguments brought up by the pro-side. In using this approach, the con-side argues for keeping the status quo in place. The status quo is the current fact, value or policy that is being challenged by the pro-side. The con-side argues against any of the pro-side case approaches by:

- Refuting the problem and/or solution
- Denying all advantages from a change in the status quo
- Arguing against the alternative(s) being presented

If the pro-side stated that there were two reasons why we need to test welfare recipients for drugs:

- Many recipients of welfare are using drugs.
- Testing will find out who the drug users are.

The con-side using straight refutation would say, “The people promoting the claim state that many recipients or welfare are using drugs, but I argue that there are not that many recipients of welfare that are using drugs.” and “They also say that their tests will find out who the drug users are, but I will argue that the testing that is proposed will not give us an accurate picture of who is actually using drugs. The con-side will still need to use evidence to prove their contentions or else they are just assertions and not real arguments.

Defense of the status quo with just minor repairs

This approach is that the status quo is generally doing an effective job. If there is a problem, it can be dealt with by making a minor change or repair in the status quo. There is no need to make a major change or an overhaul of the system like the claim suggests.

An example of minor repairs occurs when, a couple needs a larger house to accommodate their growing family. Instead of purchasing a new home, they adopt the minor repair approach and add-on to their existing home. Another example is when people avoid the cost of buying a new car by getting their old one repaired.

How to Win An Argument Every Time

Forbes Magazine, April 23, 2015

https://www.forbes.com/sites/travisbradberry/2015/04/23/how-successful-people-master-conflict/#d79024e788fd

When someone takes an opposing view on a topic you care deeply about, the natural human response is “defense.” Our brains are hard- wired to assess for threats, but when we let feelings of being threatened hijack our behavior, things never end well. In a crucial conversation, getting defensive is a surefire path to failure.

How to beat this? Get curious.

A great way to inoculate yourself against defensiveness is to develop a healthy doubt about your own certainty. Then, enter the conversation with intense curiosity about the other person’s world. Give yourself a detective’s task of discovering why a reasonable, rational and decent person would think the way he or she does. As former Secretary of State Dean Rusk said, “The best way to persuade others is with your ears, by listening.” When others feel deeply understood, they become far more open to hearing you.

Counter proposal

In this approach, the con-side admits that the overall goals of the pro-side’s case are good, but the way the pro-side had offered to reach them is not a good approach. In this alternative, the con-side presents what they feel is a better alternative. The con side admits that the pro-side has shown a weakness in the present system, which cannot be denied or refuted. The con side, however, does not agree with the way the pro side wants to remedy the weakness, and offers a better plan of attack.

You and that special someone have been living together for a period of time and are having trouble with the relationship. You suggest that it would be best if you broke off the relationship. The other person agrees that the relationship has problems, but

suggests a trial separation would be a better solution. Since both of you agree that the status quo has problems, the argument comes down to which alternative will ultimately gain target audience approval.

Hopefully, after this chapter your confidence is growing and you are more willing to “Clash” with those making arguments with which you disagree.

In the next few chapters we will be looking closely at parts of the Toulmin Model. There is an entire chapter on the Claim, Backing (Evidence), and use of Warrants (Reasoning).

> “I don’t mind arguing with myself. It’s when I lose that it bothers me.”
>
> -- Richard Powers
>
> “Anytime four New Yorkers get into a cab together without arguing, a bank robbery has just taken place.”
>
> -- Johnny Carson

3.13: The Focus of This Chapter

In this chapter, we examined the skill of “Clashing” when we are faced with an argument that we disagree with. This final chapter looked at the process by focusing on:

- **The importance of “Clashing” as “Silence means consent**” or at least suggests consent.
- **We have different levels of clashing** from “name calling” to “refutation.”
- **The first step in effective refutation is to examine the argument being presented**.
- **By using the Toulmin Model we can find weaknesses in arguments** that occur in the argument including the backing and/or the inclusion of reservations.
- **The more reservations that exist in the argument, the more significant the qualifier**, which lowers the validity of the argument on the “Continuum of Certainty.” This could reduce the validity level to below your “Threshold” of acceptance.
- **There are three traditional approaches used to refute an argument**; Straight Refutation, Defense of the Status Quo with Minor Repairs, and a Counterproposal.

3.13.1: "Edmund Burke” (Public Domain; Joshua Reynolds via Wikimedia Commons)

"The only thing necessary for the triumph of evil is for good men to do nothing."

– Edmond Burke

CHAPTER OVERVIEW

4: Claims

4.1: The Topics of Argumentation

Each day we may be faced with situation where you tell yourself need to argue.

- You've just been stopped and given what you feel is an undeserved traffic citation for speeding.
- You open up your afternoon mail and discover a letter from the IRS calling you in for an audit on last year's tax return.
- You notice that your VISA bill contains a charge you did not make and you want it removed.
- You sense that your boyfriend or girlfriend has been neglecting you and you feel the necessity to talk about it.
- You open up your grade report and get an unexpected low grade in a course.

Instead of just ranting at each of these situations you need an appropriate Claim to be phrased and argued. Only then can you know what you need to argue and what your personal responsibility is in that argument.

All of us have been in a situation where halfway into the argument we don't know what we were arguing about in the first place; or we've started an argument over one specific point, and wound up arguing about two, three, or four different things. Losing focus is easy if the parties involved in the argument are not clear as to the exact topic of the argument, or if each is advocating a different topic.

This chapter will give you some perspectives on the way to bring organization and structure to the argumentative environment by creating and utilizing a proper claim.

4.2: Defining a Claim

The foundation for all argument is the **Claim**. A Claim is any single statement of controversy advanced for the purpose of argument. Both sides of an argument, the pro- side and the con-side in a debate, should argue the same Claim. The Claim is a statement much like the topic of an argument, but it does much more.

Claims represent both the starting point and the ending point of an argument. That is, a Claim is advanced by an advocate to promote an argument. It is that same claim that will end up being accepted or rejected at the end of the argument. A Claim is the main point, the thesis, and the controlling idea. You can find the Claim by asking the question, "What is the advocate trying to prove?"

There is a difference between an argument and a discussion.

- The focus of a discussion is a question
- The focus of an argument is a statement.

Using a question, a discussion looks at a variety of topics, viewpoints, and ideas to come to a conclusion and answer the question. There are many sides and points of view that are brought into a discussion. All the participants can offer a different view or opinion. As an example you might have a discussion on, “What is the best movie of all time*?*” “Where should we go for dinner?” *or* “What should we do about the war in the Middle East*?*”

An argument looks at a single topic or subject to decide if it should be accepted or rejected. There are only two sides to an argument. You are either for the topic, or as we will see, the Claim of the argument, or against the topic of the argument. All participants will argue for one side or the other. There is no middle ground.

- The pro-side will argue for the claim and thus a change in what is currently happening
- The con-side will speak against the claim and support the current, existing situation referred to as the “status quo.”

The focus of an argument then is a statement. As an example, you might argue, “*The Godfather is the greatest movie of all time*.” The pro-side will argue for the acceptance of the Claim, while the con side will argue against the Claim in an attempt to have it rejected.

Claims represent the topic of an argument. You cannot have a constructive conflict without a Claim. In order to avoid destructive conflict, like bickering or quarreling, the Claim must be properly phrased and understood by all participants involved in the argument. There are seven key characteristics of Claims.

4.3: Characteristics of a Claim

Claims are phrased as statements and not questions. The goal of a claim is to promote a pro versus con debate-style environment. Claims often emerge as a result of a discussion, where many points of view are presented. But in the debate the claim is a statement.

Claims are phrased against the status quo in order to create the potential for controversy. Status quo refers to current beliefs, policies, rules, behaviors, or institutions. Status quo can be three things: an individual's stasis, where they are most comfortable; some institution's current beliefs, values or policies; or the starting point for an argument.

A properly phrased claim is one which challenges the status quo. There is usually very little controversy in advocating a claim that promotes or reinforces that which already exists. If a child wants her curfew changed, it wouldn't make for much controversy if she went to her parent and said, "My curfew should be left at midnight." The parent would nod in approval and there would be no debate. Now, if she went to her parent and said, "My curfew should be 3 a.m. instead of midnight," her parent would most likely take exception and respond as that is now an argument against what currently exists.

If the current status quo cannot be clearly defined, the advocate is free to phrase the claim as he or she would like, with the claim becoming the starting point for the argument. For example, I want to advocate a claim with regard to the government making more funds available for Zika research, but I'm unsure as to whether they are currently doing this, I would phrase the claim so that it represents the starting point for the debate. I make the claim that, "The United States should provide additional funding for Zika research." Now I have covered myself in case they have made money available by using the words "additional funding."

Claims should be phrased in an unbiased manner so that both sides have an equal opportunity to advocate, support, and defend their positions. There is an obvious difference between debating the claim, "*The United States should fight International terrorism*," and the claim, "The freedom-loving, democratic, human-rights supporting government of the United States should fight satanic international terrorism." The focus in the first one is clear, and allows both sides to present their positions and defend their stands. The focus in the second claim is unclear. What are we debating? Are we debating whether the United States is a "freedom-loving, democratic, human- rights supporting government?" Are we debating whether "terrorism is satanic?" Keep your emotions out of the claim. Make the claim as objective as possible. You can always use your emotions in your actual argument.

If you are trying to open up a dialogue to engage in constructive debate on a topic, an unbiased claim, free from loaded, ambiguous and high intensity language is essential. If you want to just promote your point of view, you can be as biased as you want in putting the claim together. The language of the claim should be consistent with the goal of the arguer.

Properly phrased claims should be as specific as possible. The best claims are those that indicate, to the degree necessary, who, what, when, and where. The more specific the wording of the claim, the more focused any disagreement becomes. By being as specific as you can in wording the claim, you can limit the scope of the argumentation for both the pro and the con. What about the why? You do not need to include why, because you will explain why when you develop your specific arguments to support your stand on the claim.

Effective claims promote a pro/con argumentative environment. Unlike a discussion where many different opinions and views can be expressed, a debate on a claim offers only two points of view: the pro-side, which is the side promoting acceptance of the claim; and the con-side, which is the side contrary to claim acceptance. These are the only two positions that can be argued in either a formal or informal argument. Compromise is generally not an alternative in a debate. In a debate, the choices are either to accept or reject the claim being argued. After the debate a discussion could begin that would lead to the development of a compromise, which would be a new claim.

The claim should be phrased so that the burdens (obligations and responsibilities of each arguer) are clear to both sides involved in the debate. The major obligations are the burden of proof which belongs to the pro-side, burden of presumption which belongs to the con-side, and two burdens which are shared by both the pro and the con, the burden of rebuttal, and the obligation to present a prima facie case, also known as a reasonable argument. Thus, each side in an academic argument has three burdens to fulfill. More on this later in the chapter.

Both sides debate the same claim. The dispute concerns whether the claim advanced for adherence should be accepted (the pro-side), or whether the claim should be rejected (the con-side). The side opposing the claim does not create a new one to counter the claim presented by the pro-side, because this would set up an argument with two competing pro sides, each with a burden of proof. There would be no status quo to defend. In order for the process of argumentation to take place, there would then have to be two con-sides. To avoid this, both sides argue the exact same claim. The pro-side argues in favor of accepting the claim, while the con-

side argues that the claim should be rejected. If the debate claim was, “Capital punishment should be banned” the pro-side would state, “I will be arguing for the claim that, ‘Capital punishment should be banned,’” while the con side would state, “I will be arguing against the claim that ‘Capital punishment should be banned.’” In both cases, the claim stays the same. This clarifies the burdens that each person has in the debate.

Arguing about two or more claims at the same time creates confusion and makes reaching some resolution on the claim difficult. For example, if two people are arguing about the topic of abortion, and one is arguing that, “Abortion should be banned,” the person opposed to the claim debates this claim by taking the con position and arguing for its rejection. The con side to the claim does not create their own counter-claim such as, ″A woman has the right to control her own body.″ Instead this statement might be used as a reason to reject the claim.

Debating one claim at a time also prevents what is called “kitchen sink” fighting where everything can be thrown into the argument. We should “argue” over one claim at a time. In that way, we maintain a clear argumentative focus.

4.4: Types of Claims

There are three types of claims: **claims of fact, claims of value, and claims of policy**. Each type of claim focuses on a different aspect of a topic. To best participate in an argument, it is beneficial to understand the type of claim that is being argued.

A Claim of Fact

A Claim of Fact asserts that something quantifiable has existed, does exist, or will exist. The center of controversy in a factual claim is over the reasonableness of the fact in question. In other words, a claim of fact debates whether the statement of the Claim is correct or incorrect, valid or invalid, true or false. In making such implications, we reason from something that is known to something that is unknown. Claims of fact also focus on cause-to-effect relationships.

The goal in arguing for a claim of fact is to gain audience acceptance that something that is currently not accepted as fact or that something that is currently considered a fact, should no longer be considered as such. The goal in arguing against a claim of fact is to get your audience to deny acceptance of some proposed new fact, or to defend the status quo that something that is a fact should remain so. Claims of fact may be assertions about the past, present, or future.

Past claims of fact tend to deal with the assigning of motive or responsibility for historical actions. Examples are: "General Custer was responsible for the massacre at the Battle of the Little Big Horn," or, "Democrat policies caused the rise of terrorism."

Present claims of fact tend to deal with events of current importance. Examples are: "There is a God," "Divorce is causing increased juvenile crime," "Video games lead to the increase of violence among teens," or "Climate change is exacerbated by people."

Future claims of fact deal with making predictions about the nature of future events; such as: "Tuition at community colleges will be increased next year," "Oil prices will continue to rise" *or,* "The Tesla Model 3 will become the best-selling sedan in the United States."

Claims of fact are quantifiable. That is, establishing the correctness of factual claims depends heavily on empirical verification. Such verification, or evidence, usually consists of using some combination of sensory data (sight, smell, touch, sound, and taste). We will be examining how we find quality evidence to support our arguments in another chapter.

A Claim of Value

A Claim of Value asserts qualitative judgments along a good-to-bad continuum relating to persons, events, and things in one's environment. If you construct a position claiming that something is good or bad or one thing is better than another, you've made a claim of value. Examples of claims of value are: "The Wizard of Oz is the greatest movie of all time," "Snowboarding is the greatest way to spend a vacation," *or,* "Indian food is the best food of all."

The center of argument in a value claim is over the criteria used in making the judgment. Value claims call into question a standard of comparison: bad as compared to what, good as compared to what, superior as compared to what? All judgments we make are opinions that compare two or more items and assert that one of the items is, by comparison, the better one. For instance, "Coke is better than Pepsi," "Natural gas is our best energy source," and, "George Washington is the greatest President of all time." How do you define words like "better," "best," and "greatest"? And more importantly, do you and the person you are arguing with, define them identically. If not, that difference has to be resolved first with agreed upon definitions of these key terms. Then you can begin your argument.

In our everyday decisions, we make many kinds of value judgments. Our own experiences reveal how difficult it often is to empirically quantify these judgments. Your parents ask you not to associate with a certain person because he or she is a "bad influence." You go to a certain college to get a *"good"* education. You buy a certain car because it is "better" than other similar cars. What is a "bad" influence, a "good" education, a "better" car? These words have no universality or common understanding. This puts you in the position of having to define how value judgments are made in a particular situation, to argue for that definition, and to assess how well the person/thing being judged meets that definition.

For example, with the claim "Abraham Lincoln is the greatest President ever," the advocate would have to prove either, or both that Lincoln meets the criteria for a great President, which involves arguing for the criteria as well as judging his play against that criteria AND that he meets the criteria better than any other President, which involves comparing and contrasting his presidency to other Presidents.

A person’s values are often called into play when a person is arguing morality. Since value claims cannot be empirically supported, our arguments with others tend to be qualitative and without much factual support. One significant problem in social argumentation is that we tend to view claims of value as claims of fact, and thus we shift the focus of argument from good and bad to true or false. Value claims are the hardest on which to reach consensus because of the lack of objective criteria.

A major problem we often face is that we frequently argue Claims of Value as if they are Claims of Fact. Look at the following claims.

> Law and Order is the best program on television.
>
> Barack Obama was a great President.
>
> Abortion is morally wrong.
>
> The Lakers are better than the Celtics.

All of these claims are claims of value. We tend, however, to often debate them as if they were claims of fact, or "true or false" statements. Instead of getting others to accept our position as having the same validity as theirs does, successful conflict resolution demands that one of us abandon our "*false*" position and accept the other's "true" position.

We do this without the universal criteria necessary for such "truthfulness" to be argued. We expect that others will accept our value judgments as "true," without the empirical data necessary to prove such judgments. This is why social argumentation breaks down into quarreling and bickering, and why we have such a difficult time getting along with others who see the world differently than we do. Because most values are personal, and because the process of argumentation calls for one side or the other to abandon a value, constructive conflict resolution is hard to achieve when debating value claims.

A Claim of Policy

A Claim of Policy asserts that something should or should not be done by someone about something. It proposes that some specific course of action should, but not necessarily will, be taken. The key word in a claim of policy is the conditional verb “should” which implies that some action ought to be taken, but not that it must or will be taken. For instance, "The United States should send a manned expedition to Mars," or "Students should read the assigned text material before the instructor lectures on it."

Policy claims are analyzed by locating the sub-claims of fact (the need for a policy change in the status quo), or value claims (the desirability of making such a change) inherent in the policy claim.

For example, the following claim has been advanced, "All professional athletes should be randomly drug-tested." We can analyze this claim by first finding the sub-claims of fact, which center around the need for drug testing of athletes. We might discover the following: drug use among athletes has increased, drug use affects athletic performance, athletes are role models for youth, and other methods to discourage drug use have not worked. In order to discover the sub-claims of value, we need to discuss the desirability of drug testing on athletes. We might discover: athletic performance will be greatly improved if we have mandatory drug testing, fans will have greater respect for athletes if they submit to drug tests or random drug testing is the best way to deal with drug use in sports. We can now debate the original claim using these sub-claims as the major arguments that will determine pro or con adherence.

With a claim of policy, the pro-side in a debate must establish a need in the system for a change and desirability of their approach. The con-side only needs to defeat one of the two to defeat the claim.

Remember,

- Claims of fact are quantifiable statements that focus on the accuracy, correctness or validity of such statements and can be verified using some objective evidence.
- Claims of value are qualitative statements that focus on judgments made about the environment and invite comparisons.
- Claims of policy are statements that focus on actions that should be taken to change the status quo.

4.5: The Argumentative Burdens

One of the functions of a claim is to establish the argumentative burdens of the participants. As has been described there are two sides to an argument, the pro-side and con-side. Now we are going to look at the responsibilities or burdens of each side. The argumentative burden describes the responsibilities of each participant of the argument. The person speaking in favor of the claim or promoting the claim has different responsibilities in an argument than the person speaking against the claim and defending the current situation.

The **Burden of Proof** comes first. This means that the side or person promoting the claim, the pro side, must present compelling reasons why the status quo is inadequate and should be replaced by the claim being advocated. When this is done, the status quo is presumed to be inadequate and in need of change.

If this burden is not met, that is if a “good and sufficient” argument is not presented, then the person arguing against the claim doesn’t even have to speak. The claim is dismissed because a valid enough argument has not been presented to change the status quo and continue the argument. A person decides to fight a traffic ticket in court and the police officer who issued the ticket does not show. Since the officer is not there, the ticket, or claim, that the driver broke the law, is dismissed. The driver does not have to prove he is not guilty because the pro-side failed to meet the burden of proof.

The **Burden of Presumption** is the defense of the status quo and belongs to the side opposing the claim, the con side. this burden is based on the presumption that the status quo is desirable and should remain in force.

Only after the pro-side has met its burden of proof does the con side have to meet its burden of presumption. The con side meets its burden of presumption by giving reasons the status quo is adequate and should remain in effect.

Presenting a reasonable stand for your position is your **Burden to make a Prima Facie case**. Prima facie is a Latin expression meaning “at first sight,” used in common law to describe a case that is strong enough to justify further debate. For example, being found standing near a dead gunshot victim with a smoking gun in your hand would establish a prima facie case for murder charges. In argumentation, prima facie is an advocate's obligation to present proof (logos, pathos, ethos) for whatever you assert. Another way of looking at this is the obligation of each person in the argument to present "good and sufficient reasons" for their position. Thus, to meet their burdens of proof and presumption respectively, each side must present a prima facie case.

The third argumentative obligation is shared by both sides. This burden is the need to respond to the arguments of the other side. This is called your **Burden of Rebuttal**. If during the argument you do not respond, you fail to meet this burden.

Your silence can indicate your approval and acceptance of the arguments advanced by your opponent. In Western law, silence can be reasonably interpreted as “implied consent.” According to Columbia Legal Encyclopedia, "In law, active acquiescence or silent compliance by a person legally capable of consenting may be evidenced by silence when silence implies concurrence."

For instance, your spouse requests that you put gas in the car before you return home from work. You hear him or her, but you do not respond. Your spouse can reasonably assume that you have agreed to the request. If you failed to fulfill the request, your spouse has a right to be upset with you. If you had initially responded to the request by saying, "I will if I have time," you would have met your burden of rebuttal. In that case, your spouse should not be angry over the unfulfilled request. Although I am guessing this could start a new argument with a new claim.

Argumentative Burdens

Pro-Side	Con-Side
Burden of Proof	Burden of Presumption
Burden of Rebuttal	

4.6: There Are No Ties In An Argument

Having two sides to an argument makes us realize that there are no ties in an argument. You either agree with the claim, or you disagree with the claim. But where do you start? You either stick with the status quo, the current situation, or you change to the new position suggested by the claim.

The theory of argumentation suggests you start against the claim until the pro-side can make a good and sufficient argument for you to accept the claim. The idea is that your current situation has gone along okay up until now. Why change and accept this new position? It is the burden of the pro-side to convince you of the claim being made. You always hear that in a criminal trial a person is innocent until proven guilty. The jury starts with the status quo of innocence and the pro-side, prosecutor, has to convince them to change their initial position and find the person on trial guilty.

If at the end of the argument you are still unsure if you either agree or disagree with the claim, you should reject the claim and not feel bad about it. Remember, there are no ties in an argument. Since pro-side was not convincing enough to convince you to accept the Claim, you resort back to your original “comfortable” position of the status quo. Clever sales people, however, attempt to use a tactic called **Reversing the Burdens** to manipulate you.

4.7: Manipulation by Reversing the Burdens

Understanding the claim and burdens of an argument make it more difficult to be manipulated by others. Imagine you go into a store to purchase a new coffee maker. The salesman approaches to help you out. After talking to you he suggests a specific coffee maker. You don't really like it and tell him so. He, however, does not take no for an answer and asks you why you do not like it. You begin to give him reasons and he has a response for each one. He keeps overcoming your objections and in the end, you feel foolish not to purchase the new coffee maker.

What happened here? How were you manipulated?

The answer is you fell for a classic sales strategy referred to as the "reversing of burdens."

When you walked into the store, the unspoken claim was, "You should purchase a coffee maker." The status quo was that you would not purchase one. This clarifies the burdens.

- **Burden of Proof**: the salesperson. He needs to present a compelling argument as to why you should purchase a specific coffee maker.
- **Burden of Presumption**: you. Unless a compelling argument is presented you need do or say nothing.

When the salesman asks why you do not want to purchase a specific coffee maker he is attempting to reverse the burden of proof on to you. Now you are expected to give "good and sufficient" reasons why you would not want that coffee maker. And if you fail giving valid enough reasons, then there is nothing left but for you to purchase that appliance.

Don't give up your Burden of Presumption. If you are asked, "Why wouldn't you want that coffee maker?" just respond with, "No, it is not my responsibility to tell you why I don't like it, it is your responsibility to give me good enough reasons to want it." Don't feel guilty, like you should have an answer. Remember, the salesperson has the burden of proof.

Those of you who are parents will recognize this with your children. You tell them they have to do their homework and they respond with, "Why do I have to do my homework now?" Don't forget, they are attempting to reverse the burdens. As you give them reasons why they need to do their homework now, they will argue those reasons. Don't let them switch burdens. Have them give you "good and sufficient" reasons why they should not have to do their homework at this time.

4.7.1: "The Key" by Peggy Marco on Pixabay

4.8: Fake News Stories and Manipulation of Burdens

On December 4, 2016, 28-year-old Edgar Welch entered the Washington D.C. Comet Ping Pong pizzeria. Armed with an AR-15 he was there to personally investigate the stories he had been reading online that Hillary Clinton and her campaign manager, John Podesta, were sponsoring a child sex trafficking ring operating out of the back of the pizza store.

As he was conducting his search of the store, he fired off multiple rounds from the AR- 15 that he brought with him. Fortunately, no one was hurt. After finding no evidence of the child pornography ring, Edgar Welch surrendered to the police. In an interview with the New York Times, Mr. Welch admitted that his "intel" on the child sex ring operation at the pizzeria was not "100 percent."

The quality of "intel" is a key focus of this book. How did this story rise to the point where someone would react this way? The website PolitiFact, which checks on the accuracy of web content reported that this conspiracy theory started at an online forum called "4chan" and was picked up and spread by Reddit, Twitter, and Facebook. And even though in early November it was reported by the New York Times that none of this story was accurate, people still believed and promoted the story. There are three reasons why this fake news story was effective: Ignoring Burden of Proof, Our Desire to Believe, and the Magic of the Internet.

Fake News Stories Often Ignore Burden of Proof

The first reason this story was effective was the misuse or misunderstandings of the Burden of Proof. Michael Flynn Jr., the son of President Trump's former national security pick, Lt. General Michael Flynn, posted the story. His rationalization for posting this unsubstantiated rumor gives us an important lesson in critical thinking. He presents his challenge as part of a "tweet"

> "Until #Pizzagate proven to be false, it'll remain a story..."
>
> -- Michael G. Flynn December 5, 2016[1]

Remember the rule, "He who asserts must prove." According to the burdens of argumentation, it is the burden of the person advocating a claim to prove that claim. One way to not be fooled by fake news is to refuse to accept the switching of burdens. The person advocating the claim or "news story" has the obligation to prove it. Until that time, the claim being made should be rejected.

Sharon Kaye, a philosophy professor at John Carroll University looks at the test we have when faced with arguments that seem to have no basis in fact. If we are given obligation of disproving the claim there is a challenge. Debunking these claims is very difficult because you have to prove that something didn't happen. As she states, "You can't prove a negative, but you can argue that the burden of proof lies on the other side...if they're making a claim against common sense or against more plentiful evidence." [2]

Professor Kaye also states that arguing that a fact is true just because it hasn't been proved false constitutes poor logic. I used to call this the "Tinker Bell" argument. Since you haven't proven to me that "Tinker Bell" doesn't exist, we must therefore accept the fact that she does exist. See how absurd that argument is. And yet it is the strategy that is being used to manipulate us with "Fake News." Always make the side advocating the claim fulfill their Burden of Proof.

More recently another conspiracy theory emerged that Democratic National Committee staffer Seth Rich had been murdered because of his work on the committee and that he had leaked damaging emails to WikiLeaks or was ready to talk to the FBI. One theorist suggested that Hillary Clinton herself had orchestrated his killing to keep him quiet. As with the "PizzaGate," no evidence was presented to support this argument. The individuals supporting this conspiracy were not fulfilling their Burden of Proof and instead they were attempting to reverse the burden.

National Public Radio sums the problem up very clearly when they stated:

> *"As with many other conspiracy theories, like the assertion that a Washington pizza restaurant was at the center of a child sex ring tied to top Democrats, this kind of assertion in part functions by trying to shift the burden of proof. Rather than proving with hard evidence that there was a conspiracy surrounding Rich's murder (or that the owners of Comet Ping Pong, the pizza restaurant, were harming children), the people making the unproven claims end up pushing the other side to try to disprove it."* [3]

Reference

1. Alan. Smith, "Michael Flynn's son spars with Jake Tapper over fake 'pizzagate' story that led armed man to go to restaurant," 2016, https://www.businessinsider.com/jake...nn-son-2016-12 (accessed October 31, 2019)
2. Nina Agrawal, "Where fake news came from — and why some readers believe it 2016," "www.latimes.com/nation/la-na...2016-story.htm (accessed October 31, 2019)

3. Danielle Kurtzleben, "Unproven Claims Reemerge Around DNC Staffer's Death: Here's What You Should Know," 2017, https://www.npr.org/2017/05/17/52880...ou-should-know (accessed October 31, 2019)

4.9: We Want to Believe

The claim that Hillary Clinton was operating a child pornography ring was stated with no evidence. And yet that seemed enough to convince many individuals. Why? One reason is that it supports a stasis, or prior belief, and so very little proof is needed to accept it. Professor Kaye continues by arguing that, *"if a lie is telling you something you want to hear, you're more likely to think it's true."* [1]

This is part of our perception process where we process cognitions and information that is consistent to our currently held beliefs. This allows us to maintain our stasis, our relaxed state, and be comfortable. No matter what your political beliefs, allow yourself a level of discomfort by challenging your views with seemingly contradictive views.

Conned

Since 2008, consumer fraud in the United States has gone up by more than 60 percent. Online scams have more than doubled...The total money lost: $525 million.

For the total U.S. population, between 2011 and 2012 – the last period surveyed by the Federal Trade Commission – a little over 10 percent of adult or 25.6 million, had fallen victim to fraud...The majority of the cases, affecting just over 5 million adults, involved one scheme: fake weight-loss products.

Countless more cases go unreported...

We get a unique satisfaction from thinking ourselves invulnerable...safe in the knowledge that you are keener, savvier, more cynical and skeptical? They may fall for it. You? Never.

Introduction to book, The Confidence Game, Why We Fall for it Every Time by Maria Konnikova

Reference

1. Nina Agrawal, "Where fake news came from — and why some readers believe it 2016," "www.latimes.com/nation/la-na...2016-story.htm (accessed October 31, 2019

4.10: The “Magic” of the Internet

According to the Pew Research Center almost 50% of people from the ages of 18-49 get their news from online sources. Historian and Journalism Professor Andie Tucher at Columbia University has suggested that even though gossip and hoaxes have been the staple of supermarket tabloids, on email chains and online for years, the current brand of fake news and its popularity is a product of new technology colliding with a widespread mistrust of big institutions.

> *“People have not yet sorted out in their minds how they’re going to incorporate [social media] into their news stream. They may be inclined to believe a false report originating on social media because it feels more magical, more interesting or even more authoritative because it seems more unmediated.”* [1]

A properly worded claim, one that is appropriate to the argumentative environment, can become the basis for successful conflict resolution. Without an appropriately structured claim, critical thinkers will find their arguments dissolving into bickering, quarreling or destructive fighting. It is not an understatement to say that good, effective and potentially successful argumentation must begin with a mutually acceptable and correctly stated claim.

If you don’t let the argumentative burdens to be switched, you can avoid being manipulated by others. Sales people or fake news creators will have much less control over you.

Reference

1. Nina Agrawal, *"Where fake news came from — and why some readers believe it,"* 2016, *"www.latimes.com/nation/la-na...2016-story.htm* (accessed October 31, 2019)

4.11: The Focus of This Chapter

Good critical thinkers, those who desire constructive conflict resolution, need to focus their argument around a clear, correctly worded claim. In this chapter, we focused on:

- A claim is an unbiased statement, worded against the status quo.
- There are only two sides to the argument. You are either for the claim or against the claim.
- The side of the claim you support directs the burdens or obligations you have in the argument.
- If you allow the burdens to be switched, you can easily be manipulated.

CHAPTER OVERVIEW

5: Building Your Case With Issues, Analysis And Contentions

5.1: The Skill of Knowing What Questions to Ask

The other day my wife announces, "*I need a new car*." We had finished paying off her car a couple of years ago and she was looking around for a new car to replace the one she had been driving for the last several years. She offers her claim, "*Suzy should have a new car.*" I'm thinking, that we could drive her car for another year or so and it would save us money. My wife does not see it my way.

Before we can make a decision on this claim, we need to analyze this argument by asking and answering the important questions associated with this claim. In other words, we need to discover the **Issues**. Answers are easy. We have the entire contents of the Internet to help us find the answer. The challenge is knowing what questions to ask. I am guessing you have never had any formal training on knowing how to discover the key questions to ask of any claim. You are not alone.

Pinnacle Foods decided to launch Duncan Hines ready-cakes into Japan. They realized that Japan was a great, untapped market. They did great market research on the Japanese per capita income, and grocery spending. They even researched consumer tastes to determine just the right level of sweetness in their baked goods. Pinnacle Foods realized that there was virtually no competition in Japan for ready-made cakes. Thousands of boxes of cake mix were shipped and they readied themselves for all the profit they would make. But very few sold.

What went wrong?

5.1.1: "Duncan Hines Blue Velvet Cake Mix" (CC BY 2.0; Mike Mozart via flickr)

Pinnacle Foods failed to ask one important question, "Does the typical Japanese family have a 'conventional' Western oven needed to bake the cake?" They did not. The typical Japanese family had rice cookers, not ovens. Thousands of cake mixes went unsold. The answer was easy to find; asking the correct question was much more challenging.

Coming to a decision on any claim and building your case for or against the claim begins with asking and answering key questions. This can only be done by carefully analyzing the claim under discussion. To do this, critical thinkers need to first challenge their assumptions and then proceed with an organized method of analysis, in order to discover the important questions, or as we call them here, Issues. Issues become the foundation for taking a position on the claim, and formulating Contentions to argue that position.

5.2: Assumptions and Inferences

As we start analyzing a claim we need to realize that we all begin this process with certain preconceived ideas and beliefs that can guide or misguide our thinking. Duncan Hines assumed that Japanese families had ovens, like those families in this country. Stated another way, we all have certain biases and assumptions that influence our thinking. When analyzing a claim, we need to understand the difference between an assumption and an inference we naturally make about the claim being argued.

Inference refers to something we believe to be accurate based on something else we believe to be true. If you email someone and they do not email you back, you may infer that they are mad or upset with you. Inferences can be correct interpretations of our environment or incorrect interpretations of our environment.

Assumption refers to something we already assume or presuppose. As described by Richard Paul and Linda Edler.

> *"Usually it is something we previously learned and do not question. It is part of our system of beliefs. We assume our beliefs to be true and use them to interpret the world about us. If we believe that it is dangerous to walk late at night in big cities and we are staying in Chicago, we will infer that it is dangerous to go for a walk late at night. We take for granted our belief that it is dangerous to walk late at night in big cities." (Paul)*

Based on our assumptions, we make inferences that guide our decisions and actions. To make sure these assumptions and inferences are accurate, we need to question them.

5.3: Challenging Our Assumptions

Before you begin to analyze a Claim take time to list and challenge any assumptions you may have on that claim. This useful approach to analyzing a Claim is known as a “Key Assumption Check” and is a very important starting point at the beginning of any decision you might want to make. And just before you make a final decision, recheck those assumptions.

Way, way back in the 60’s when applying for a job, having long hair for a man was a handicap. Many employers had the assumption that a person with long hair was some sort of "hippie" and they therefore inferred that this person was a bit lazy and not that serious about a job. The result was they were rejected. Now this may seem like ancient history, but even now if a woman shows up for a job interview with her head covered with a hijab a series of assumptions about her will be made by the employer. From these he or she may infer a variety of behaviors of that job applicant. The key is we need to recognize and challenge these assumptions to help us make the best decisions possible. How many great potential employees have not gotten a job due to inaccurate assumptions being made?

When my son was in grade school he wasn’t doing his math homework and instead would watch cartoons on television. I made the assumption that he was being lazy and was about to punish him. Instead, I challenged that assumption by asking him questions. In the end, I found out he was avoiding doing his math homework because he had been absent when his teacher explained how to do them and he was afraid to ask his teacher for help. By challenging my assumptions, I was able to make a much more informed decision on what to do.

Some of your assumptions are easily recognizable, while others may be more hidden from you. We may have a variety of subconscious biases that influence our decisions without even being aware of them. Their hidden nature makes them difficult to discover.

Imagine you hear a report of a mass murder that involved explosives. What is your first reaction? Do you assume a terrorist action and infer specific types of ethnic characteristics? Imagine you hear a news story that involves a member of the National

Rifle Association? Or a member of the Democratic or Republican Party? What assumptions do you make? Do you recognize those assumptions or are they hidden?

In any case, at the beginning of any analysis you need to take the time to challenge your assumptions by asking questions or as we call them, *Issues*.

5.3.1: "Challenge Assumptons" (CC BY 4.0; J. Marteney)

5.4: Issues

In argumentative communication, an issue is any question or disputed item upon which the final product or conclusion of the argumentative encounter is dependent. The goal of the critical thinker is to discover the appropriate issues inherent in the claim. Critical thinkers must know what the important issues are that must be both asked and answered so that they can take and argue a specific position on a claim.

Consider the example that opened this chapter. Before I can say yes or no to purchasing a new car, I need to ask the questions appropriate to making up my mind. These questions are the issues that I have determined need to be both asked and answered in order for me to make my decision.

General Characteristics of Issues

Issues are phrased as questions. A statement, or a phrase is not an issue. If we are arguing, "Air pollution in Los Angeles needs to be reduced by 10% over the next 5 years," an issue would not be the word, "Traffic." Instead we need to ask a full sentence question such as, "Would a 5% reduction in traffic lead to a 10% reduction of air pollution?"

Issues need to be relevant to the claim. In order for a question to be considered an issue for the claim, it must be related to the claim under discussion in an important manner. If I am arguing the claim that "Apple Stock will rise another $100 in value over the next 12 months," the issue of, what color is the company logo does not seem very relevant. Not all questions are issues. Issues need to be relevant.

Issues can be introduced by either the pro-side or con-side. Both sides have the right to question the claim, and thus both have the right to ask appropriate questions regarding the claim. If you are not sure which side you are on, answers to issues will help determine if you are for or against the claim.

There is no set number of issues a person can discover. The number of issues will vary from claim to claim. Time for discussion or debate and research capabilities will limit the number of issues.

Issues bring organization to the argumentative environment. This is especially the case when the questions are prioritized, so that the answer to a question is dependent on the answer to the question preceding it. During a job interview, the claim is advanced that "Fernando Diaz should be hired." The questions asked represent the important issues that must be answered by the candidate, so that those in charge of hiring can make a decision on that claim.

Issues should be as specific as one can make them. Vague questions lead to vague answers and are therefore useless. Specific questions lead to specific answers and are much more useful. If you are deciding to purchase a used car, you might ask the question, "Is the car in good condition?" This is a vague question. What does good condition mean? Better questions might focus on the overall mileage of the car, the condition of the interior and exterior, or the car's gas mileage. The answers will provide you with specific bits of information that will allow you to develop criteria for what a "good condition" used car is, and will be helpful in your overall decision-making process.

Types of Issues

Once the issues have been discovered, they can be classified. Not all issues are equally important. Some issues are more important to the final disposition of the claim under debate. In order to find those issues of ultimate importance, we can classify them into the following four types:

Potential Issues These are all of the possible questions that can be asked of the claim. In theory, the number of potential issues is unlimited. In practice, the number of potential questions that can be discovered is limited by the amount of research and time one has to spend on the claim being argued. If you have the claim, "Abortion should be banned," and you limit your reading to only the newsletter put out by "The Right to Life Society," the number of potential issues will be limited to the material contained in that one document. The greater the number of potential issues discovered, the greater the chance of discovering the right questions in order to make the best quality decision on the claim under debate.

Admitted Issues These are questions raised by one side and agreed to by the other side. The purpose of an admitted issue is to make that issue non-controversial or "moot." In this way both sides hope these issues will turn out to have little or no bearing on the final outcome in terms of claim adherence. Finding the admitted issues is a way of narrowing the list of potential issues.

Real Issues These are the important questions that remain after narrowing the potential issues down. The real issues can have an impact on the outcome of the claim and merit consideration for discussion. Depending on the amount of research done and the

number of potential issues, there may be an excessive number of real issues to discuss in a limited period of time. Real issues need to be prioritized in some descending order of importance.

Ultimate Issues These are the key questions that, in and of themselves, are sufficient for the disposition of the claim. These are issues that determine whether you are for or against the claim. When arguing in front of an audience, you must answer the ultimate issue(s) consistent with the beliefs of the audience or they will deny adherence, no matter how many other real issues the side wins. Usually, the ultimate issue comes from one of the real issues. One may discover the ultimate issue early in the discovery process, or it may not be found until very late in the process. To some extent, ultimate issues are audience controlled; that is, what one audience considers the ultimate issue, another audience may consider just a potential, admitted or real issue. However, in any argument, discovering the ultimate issues is the key to making a quality decision.

In a debate on the claim, "The Federal Government should ban abortions" the ultimate issue of the pro-side advocating the claim might be, "Does the fetus have the right to life?" The con-side, advocating the status quo and arguing against the claim, might have as their ultimate issue, "Does a woman have a right to her privacy?" Since neither side can agree on one ultimate issue this debate continues.

Overall, issues are the questions inherent in the claim that are discovered through research, brainstorming, and analysis. These discovered questions must be answered so that a stand on the claim can be taken, and so that the arguer knows what "arguments" to present in defense of that stand. Answered issues become the basis for your contentions, which lead to the reasons why you are for or against the claim.

5.4.1: "Narrowing of Issues" (CC BY 4.0; J. Marteney)

Brandon Stanton is a photographer and author of *Humans of New York* where he tells the stories of individuals he meets. This story tells of a boy planning to marry his girlfriend. His ultimate issue was, “Is she Catholic?”

> *“I broke up with my girlfriend this morning. We’d been together for three years. But I’m Catholic, and she doesn’t know if she believes in God or not. I wanted to propose to her one day. I think she’d be a great mom and a great wife. But I feel like this might be something we can’t overcome. I want to get married in a Catholic church. I want to raise my children to be Catholic. It’s important to me and it's something that we’d have to deal with eventually. So, I didn’t think it would be a good idea to keep putting it off. But it really hurts to lose her. Both of us were bawling our eyes out. She was such a big part of my life. Every time something good happens, she is the first person I want to tell. And I do respect that she refuses to believe in something just because I do. But I don’t know what to do. I’m hoping God will give me an answer.”* [1]

Effective Issues

As you can probably imagine, some issues are better or more effective than others. Previously we have seen a basic list of the basic characteristics of an issue. Below is a list of more specific requirements for an issue to be effective in judging an argument and making a decision.

Consider the Claim, **The United States should increase the use of renewable energy**.

Issues need to be questions. This is the definition of issues, but I wanted to remind you here, because we often are tempted to make statements instead of ask questions. Instead of stating, “Global warming is caused by man’s use of fossil fuels.” Ask, “Is global warming caused by man’s use of fossil fuels?”

You may be used to hearing the word "Issues" to refer to problems. For example, "They seem to be having issues in their marriage." or "What are the issues with drug abuse?" In the world of argumentation, however, Issues refer to questions.

Avoid "Should" questions. Should is a word we reserve for claims of policy which are more wide-open (broad). Issues need to be more narrowly focused. "Should we reduce carbon emissions?" is actually the claim, the entire focus of the argument. An issue should look at a part of this claim. What questions need to be asked so that a decision on the claim can be made? One issue might be "Are carbon emissions a significant influence on global warming?" The more narrowly focused the issue, the more useful.

Ask only one question per issue. A mistake often made when asking issues is the frequent tendency to make them a two-part question. The answer is then confusing when trying to answer both questions in the same issue. "Is global warming increasing and is China the biggest contributor?" Instead ask two separate issues, "Is global warming increasing?" and "Is China the biggest contributor to global warming?"

Keep issues neutral. Don't use biased statements or words to give your issues a slant for or against the claim. Instead of asking, "Is the idiotic idea of left wing liberal scientists that argue we are experiencing global warming inaccurate?" Instead, "Is the theory of scientists that we are experiencing global warming inaccurate?" We want to use Issues to help us make a decision, not support a bias we already hold.

Avoid starting an issue with "Because." When you introduce a question with background information you create a leading question guiding towards a specific answer. "Because scientists make mistakes, can we trust the conclusions of the scientists?" You want to eliminate as much bias as you can. And you don't want the argument to focus on the question, "Do scientists make mistakes?" Instead, just ask the question, "Can the conclusions of scientists be validated?"

Avoid "How" and "Why" questions. These are useful for background information, but may not always be that useful for the final decisions. "Why does carbon emissions lead to global warming?" is a good background question, but not a useful issue. A more useful issue would be, "Is it possible to reduce carbon emissions by 10% over the next 10 years?"

Use issues with "Yes" and "No" answers. Questions that ask for opinions or explanations can offer information that can be useful, but these answers are probably more useful as background information and not actual decision-making questions. It is more effective to get yes and no answers. Instead of asking, "What do you think will be the future of global warming?" This question is good for overall information, but a specific issue for the claim would be, "Do we now have renewable energy sources that can replace current fossil fuel production?"

Keep issues relevant to the claim. There are times when issues that are chosen won't help you make a decision on the claim. They may be interesting questions, but their answer does not help you make a decision on the claim being argued. "Will home solar panels become more attractive?" This is an interesting question, but the answer may not really help you make a position on the claim, **We should purchase solar panels**.

Keep issues specific. This has been mentioned before, but it is so important I wanted to repeat it. Issues should be as specific as one can make them. Vague questions lead to vague answers and are useless. Specific questions lead to specific answers and are therefore useful. Avoid questions such as, "Is it a good idea to reduce fossil fuel emissions?" What do you mean by a "good idea?" Or "Will ocean temperatures increase in the future?" "Increase" by how much? Both of these are vague issues and virtually worthless when deciding on a claim.

Remember, if you are determining your position on a claim you first ask questions, and then decide. Try not to lean one way or the other on the claim. You are using issues to learn information that will help you make a decision on a claim. Challenge your assumptions.

If you already have a position on the claim or have been assigned a side that you will be arguing, you look for issues whose answers can support that position.

Why Don't We Ask Questions? Paul Sloane, Lateral Thinking Expert

5.4.2: "Photo of Paul Sloane" (CC BY 3.0; Paulsloane via Wikimedia Commons)

If it is obvious that asking questions is such a powerful way of learning why do we stop asking questions? For some people the reason is that they are lazy. They assume they know all the main things they need to know and they do not bother to ask more. They cling to their beliefs and remain certain in their assumptions – yet they often end up looking foolish.

Other people are afraid that by asking questions they will look weak, ignorant or unsure. They like to give the impression that they are decisive and in command of the relevant issues. They fear that asking questions might introduce uncertainty or show them in a poor light. In fact, asking questions is a sign of strength and intelligence – not a sign of weakness or uncertainty. Great leaders constantly ask questions and are well aware that they do not have all the answers.[2]

Discovering Issues

Issue discovery is the process of finding questions and answers in preparation for decision-making or advocacy. Issue discovery concentrates on the identification and examination of questions, whose answers will lead to a resolution to the argument. Issues are vital to the critical thinking process. An issue is something central to the outcome of the argumentative encounter, and issues serve as the foundation of particular arguments. The purpose of issue discovery is to find the "best" questions available in resolving the claim.

Probably the most common method of discovering issues is Brainstorming. **Brainstorming** is a research strategy that stimulates thought by thinking of all the possible questions that come to mind. Here you don't spend time judging the quality of the issues, you just think of as many issues as you can. Whatever "pops" into your head. The primary purpose of brainstorming is to generate as extensive a list as possible of questions, ideas, thoughts or alternative solutions, which focus on a specific topic or problem. Analysis and commentary on ideas is held off until after the brainstorming session has concluded. In order to be effective, it is useful to have some background related to the topic under discussion. This method can be enhanced when done in a group and you can use each other's ideas to stimulate ideas of your own.

Beyond the randomness of brainstorming, there are specific strategies that can help you discover useful issues. Issues can be discovered through **Research.** One way research can be done in argumentation is by using a specific pattern of analysis that is applied to the argumentative claim. Analysis is a systematic approach to problem solving and decision-making. Using different methods of analysis triggers potential issues.

Four Patterns of Analysis

There are **four** patterns of analysis that a critical thinker can use to help him or her discover the key arguments that he or she can use to try and convince a target audience to accept their stand on a claim or help arrive at a decision.

Cost/Benefit Analysis. The term cost benefit analysis is used frequently in planning and decision-making. Using this method, you evaluate the pros and cons before taking a course of action. You will ask questions as to the positive aspects of accepting the claim and issues that would refer to negative outcomes of accepting the claim. What could be the benefits if we adopt the claim? What could be the costs of accepting the claim? If the answers to these questions suggest that the costs outweigh the benefits you would reject the claim. And if the answers suggest the benefits outweigh the costs, you would accept the claim.

For example, on the claim, **Suzy needs a new car**, using cost analysis, Suzy would ask questions like:

"Will the insurance for the new car be more than $500 per year more than I am paying now?"

"Will the new car have improved gas mileage that will save me at least $50 per month on gasoline costs?"

"Will the cost of keeping the old car be more than the cost of purchasing a new car?"

After answering these questions the cost/benefit relationship can be determined. If Jim and his wife Suzy determine that the costs outweigh the benefits, the will reject the claim. If Jim and Suzy determine the benefits justify the costs, they will accept the claim and purchase a new car.

As a side note it should be remembered that **every benefit has a cost**. The cost could be a specific cost. If you go to a movie, you pay for a ticket. That is a specific cost. Since you cannot do two things at once, if you go to a movie, you gave up going to a party that was going on at the same time. The cost of going to the movie was not only the price of the ticket, but also not going to the party. Economists refer to this as, "Opportunity Costs." An opportunity cost refers to what you gave up or what you could have done, by doing a particular action. By reading this chapter right now, you are giving up doing other things, like watching television or being with friends. Reading this chapter cost you those activities.

But isn't it worth it?

Priorities Analysis. This pattern of analysis says we live in a world of scarce resources. Neither individuals nor societies can have everything they want; pursuing one objective invariably involves trade-offs or sacrifices of other objectives. This pattern of analysis discovers issues by asking the following questions:

- What are the claim's objectives?
- How are they prioritized?
- What are the trade-offs if we assume adoption of the claim?

Using the same example as in cost analysis, Suzy needs to ask questions about the financial objectives for her life and proceed to prioritize them.

- Does Suzy want increased financial independence*?*
- Does the house need decorating*?*
- Does Suzy want to travel?
- Does Suzy need reliable transportation*?*

As much as she would like, Suzy can't have them all, so she must prioritize. At most, she can only have the first 2 or 3 of her priorities. If the answers to the issues on financial independence, decorating her house and travel, are placed in the 1-3 spots, then Suzy would have to reject the claim. If reliable transportation were ranked 1 or 2, Suzy would accept the claim.

Programs Analysis. According to this pattern, policies are adopted to achieve certain goals; they are continued or abandoned depending on their effectiveness in meeting these goals. These goals may be personal goals you have like going to college or goals of an organization of which you are a member. The claim that is being argued is evaluated against the goals that have or have not been reached. Using this pattern, issues are discovered by asking the following questions:

- What are the specific goals of myself or my organization*?*
- What are the specific goals of the claim*?*
- Assuming adoption of the claim, can the goals be met*?*
- What will the impact of claim adoption be*?*
- Are there any reasonable alternatives*?*

Using this pattern of analysis, Suzy would determine what her goals are and examine if the proposed program could meet the goals. Suzy has the following objectives: Financial independence, home improvement, reliable transportation, quality gas mileage, and self-satisfaction of driving a car of which she is proud. Suzy must now determine if the proposed program of purchasing a new car can meet these goals. If she determines the program can, she will accept the claim. If she determines the program can't, she will reject the claim.

I have had many students faced with the claim, **I should work full time.** Their goal is to complete a college education. Asking and answering questions about this claim can help determine if adopting the claim helps or interferes with their college goals.

Continuities Analysis. Seldom do our choices make sharp, overt breaks from the past. Instead we usually try to make our decisions consistent with tradition. In light of this traditionalist orientation, issues are discovered by asking the following questions:

- Has this claim been debated before?
- Has a claim similar to this ever been adopted?
- When was a similar claim adopted?
- What were the results of adopting the similar claim?
- Is adopting this claim consistent with other facts, meanings, values, or actions that we regard as justified or appropriate?
- Has the situation changed to warrant a change in tradition?
- If adopting this claim is not, is a break from tradition warranted?
- Why would a break from this tradition be warranted?

Using this analysis pattern, Suzy can analyze the claim, **Suzy should lease her new car.** In the past, she has always purchased new cars and never leased one. Using this analysis strategy, Suzy can take a look at what she has done in the past and whether it has been successful.

- If Suzy has purchased new cars before, how did that turn out?
- Is the proposed action consistent with Suzy's needs, wants, and desires?
- Has the situation changed to make leasing look more desirable?

Once these questions are answered, Suzy can choose to accept or reject the claim.

These four different patterns of analysis provide a framework for discovering issues. Take the claim you are attempting to advocate or the claim you still need to decide. Apply these methods of analysis to that claim and you should begin to create a useful list of potential issues.

In addition to these approaches to research there is one more addition method for discovering Issues. Each type of claim has its own "Stock Issues."

Stock Issues

Stock issues refer to specific formulated questions you can ask of any of a particular type of claim. There are stock issues of fact, stock issues of value, and stock issues of policy. This is a reason why it is important to know what type of claim you are arguing, as it leads you to ask some initial issues.

The Two Stock Issues of a Claim of Fact

A claim of fact has two groups of questions:

- What questions need to be asked to determine if the fact does indeed exist?
- How do the determining questions apply to this particular situation?

For example: in a murder investigation, law enforcement officials ask questions like:

- What was the motive?
- When did the crime take place?
- How was the crime committed?

The second series of questions focus on an individual:

- Did that person under suspicion have a motive to commit the crime?
- Did the person under suspicion have the opportunity to commit the crime?
- Did the person under suspicion have the ability or means to commit the crime?

The Two Stock Issues of a Claim of Value

A claim of value has two groups of questions:

- What questions need to be asked to determine if the subject of the claim can be evaluated as good, bad, just, unjust, etc. These questions establish the criteria to be used to evaluate the subject of the claim.
- How does the criteria that has been established apply to this particular situation?

For example: If you are deciding if a movie you just watched was a great movie, you would initially ask the question:

- What makes any movie Great? By answering this question, you establish a criterion for what makes any movie great.

The second series of questions focus on applying the criteria to a specific movie.

- Did the movie you just watched fulfill the criteria established by the earlier issues?

Discovering these issues will help us not be confused by arguing a “Claim of Value” as if it was a “Claim of Fact.”

Reference

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5.5: The Seven Stock Issues of a Policy Claim

A Claim of Policy has 7 unique groups of issues.

1. The first set of questions we ask determine if there is actually a problem that needs to be fixed. Is the perceived problem just a minor difficulty in the status quo? Is an increase in the murder rate in the U.S. a real problem or just a temporary anomaly? Is the problem being suggested a real problem or a misinterpretation of information. Is there voting fraud or a person's bias of their interpretation of information they have read?

   Once you decide there is a problem, then you need to determine the magnitude of the problem.

2. One set of questions examines the impact of the problem. Just how important is the current problem that is being addressed by this claim? Is the claim focusing on a major problem or just an inconvenience? If the current situation is costing you or others money or time you need to ask questions to determine how much and if that is a significant number. Is the problem significant enough to warrant the resources needed to solve it? This is actually a type of cost/benefit analysis.

   A second set of questions may look at the future significance of the problem. The problem may not be bad now, but if untreated, how significant can the problem become. This is the area of questions that is being used to examine the vaccination discussion. Since few parents do not vaccinate their children, the problem is not that significant in most areas. The issues here are how widespread will the problem be in a few years and what will then be the impact of not vaccinating children. Many people advocating for solutions to "Global Warming" do not argue the current effects of global warming, but instead argue that there are potential devastating effects of Global Warming.

   A problem might exist with the status quo, but if the problem is insignificant we may not want to contribute significant resources to solve that problem and thus reject the claim.

3. Is the source of the problem structural, caused by rules or regulations, or is it attitudinal, caused by what people think or their traditions? If the problem is based on an actual structural problem, then the issues examine what are the structures involved that create this situation. If the problem is caused by attitudes, then the issues ask how deep are the source of those attitudes and can they be changed through persuasion or is a change in the law or procedures needed?

   Smoking is still the number one cause of lung cancer. To decrease this problem massive advertisement campaigns were begun in the 1960's and the rate of adult smokers went from 42% of adults down to 17%. In this case, the answers to the issues led people to believe that a structural change was not needed, but instead attitudes could be changed by an awareness campaign. (Centers for Disease Control and Prevention, 2016)

   Injuries and fatalities from traffic accidents are considered a significant problem. One solution to this problem was to increase the number of drivers using seat belts. Although there was no structural reason prohibiting people from wearing seat belts, people chose not use them. The issues in this argument led people to believe that the attitudes of enough people could not be changed through an awareness campaign. Thirty states have mandatory seat belt laws now and the result has been a decrease in fatal and injury accidents.

   If the problem is structural we need to change the rules or pass legislation. If the rules of the golf club say that people of color are not allowed to join, then a structural change to the rules must be made in order to solve the problem of discrimination. If, however there is no rule denying admittance, then it is the attitude of the members that needs to be changed.

   If the answers to these issues have determined that a structural problem exists, we can move on to ask questions to determine if that problem can be solved in the current system or "status quo" or do we need to create an entirely new system.

4. Instead of adopting the claim, can we just make minor adjustments in the status quo to reach the goal of the claim? These are sometimes referred to as a "minor repair." For example, assume that we find it is a problem that not enough people are voting in the national election. We are arguing the following claim; **A national holiday should be created so every citizen can have the day off to vote.** Instead of adopting this claim, we might ask,
   - Can extending the hours of voting significantly increase participation?
   - Could extending voting over two days significantly increase participation?
   - Could encouraging more absentee ballots significantly increase participation?

   Answers to these issues might suggest repairs needed to remedy the problem that the claim attempts to solve. And if only these minor repairs are needed to solve the problem, then we can initiate them and reject the claim.

Let's assume that the answers to these issues suggest that the problem cannot be fixed within the system. We then move on to ask questions about the possibility of a solution.

5. Does the person advocating the claim have an actual plan to solve the problem that the claim is attempting to solve? Assume there is the claim, **The Federal Government should eliminate terrorism in the United States.** Does the advocate have an actual plan to fulfill the claim? Additional questions are then asked:
   - Is the plan actually workable?
   - Is the plan legal?

   Part of the plan for this claim may include wiretaps. The issue could be asked if these wiretaps are legal or could they be implemented. Other questions would include do we have the manpower and other resources that the plan needs?

   Assuming that the answers to this plan suggest that the plan is workable and that there are no barriers to implementation. Now we need to know if the plan will actually solve the problem.

6. It is not enough to just have a workable plan; the next series of issues explores the effectiveness of that plan.
   - Can that plan actually reach the objective in the claim?
   - Are there other aspects not covered by the plan that would interfere with the solution suggested in the claim?

   We could change the rules in the golf club to now allow for the admittance of color, but would the attitudes of the membership continue the denying of membership?

   The answers to all our issues up until now suggest that there is a significant problem that the claim has a plan that will work and solve the problem. The one set of issues remaining examines the negative ramifications that could occur.

7. Finally, we look at the undesirable results that could occur if the plan was adopted and the claim affirmed. Any action that is taken will cause additional aspects to be affected. You see this all the time in advertisements for prescriptions. After they tell you what the medicine can do for you, they then list all the possible side effects. You would then look at this list and see if it is really worth taking that medication. Here then you would ask a series of questions that would determine:
   - What are the ramifications or side of effects of implementing the plan?
   - "How significant are those ramifications?"
   - Does the significance of the ramifications outweigh the benefit of solving the initial problem?

   If these negative ramifications outweigh the positive results obtained by accepting the claim, we would then reject the claim.

5.6: Contentions

Through analysis we determine our issues. Using research, we answer our issues. A contention is an answered issue. Contentions form the basis of your argument. They become the reasons why you have your specific position on the claim.

If you were applying for a job the **claim** would be,

We should hire you for this position.

One of the **issues** might be,

“Are you qualified for this position?”

Assuming that the answer to this issue is “Yes,” The **contention** would now be,

“I am qualified for this position.”

This contention becomes a reason why you argue that the claim should be accepted and you should be hired.

Contentions are the main arguments that support your position on the claim.

Some people call it a reason, a justification, a point of interest, or a main point. They all serve the same purpose, to provide the rational of your case. Both the pro-side and con- sides have the right to introduce their own set of contentions that they feel will best support their position on the claim. At the same time, there is also the argumentative burden to also respond to the contentions of the other side.

Contentions mostly come from the ultimate issues that both the pro-side and con- side reached as a result of their analysis of the claim. Contentions are the main arguments that you feel are the most important and must be argued and backed up with appropriate logic and documentation or evidence.

Contentions become the justifications for your position on the claim being argued. Contentions are your reasons why your side of the claim should be accepted. If you were applying for a job and you were asked questions like:

- Do you have the experience needed for this job?
- Are you punctual?
- Do you have the ability to learn?

You would answer them and then to prove you should be hired your contentions would be:

- I have the experience needed to do this job well.
- I make it a habit to always be on time.
- I am always learning to improve my performance.

Contentions reflect a logical organization of the arguments you are making in support of your position on the claim. Each contention should assert only one main conclusion at a time. These contentions will be supported by using evidence and logic to convince the target audience to draw the same conclusions as the arguer. Both the pro and the con may present different contentions to persuade a target audience that adherence to their position on the claim should be granted. However, both sides are obligated to respond to and argue against each other’s contentions.

Contentions organize and logically structure an advocate's ideas as to why a target audience should accept their point of view. In addition, explaining why we hold certain positions, and arguing in support of them, helps us to clarify our own thinking as well. If you know your contentions, you won’t get lost in your argument.

One argumentative strategy is the **Rule of 3**. When asked for your opinion don’t just begin talking, think of three reasons, or contentions that will support your opinion. If you are asked in your job interview why you should be hired, pause a moment and think of three reasons like maybe your education, what you did on your last job, and your potential. Look at your audience and tell them, “There are 3 reasons you should hire me.” Then start with your education by making it a full sentence contention. “The first reason you should hire me is I have the educational background to do well.” After explaining that contention you can move to the second one and then the third.

Contentions should flow from one to the next, advancing the overall case for your side. All of your contentions should relate to your argumentative stand on the claim being debated. That is, each contention building off the last and ultimately showing why your position is the one that should be accepted.

Contentions are the foundation of all argumentative presentations. The process of creating a supported argument leads to the understanding and clarification of advocated ideas. Contentions cause positions to become defined.

5.7: Analyzing a Policy of Claim with Issues and Contentions

We can now apply these seven methods of analysis to an actual claim that was made a few years ago in a community in the San Fernando Valley. From these issues, we will then be able to create contentions.

In Studio City business owners were complaining that the presence of prostitutes was bringing down the area and keeping customers away. There was a motel in the area that these ladies used and the business people in the area felt that if that motel were closed, then the problem would disappear. The claim before the city council was:

Resolved: **The Flamingo Motel should be closed down.**

Before they could make their decision, the council members analyzed this claim of policy.

Issue 1: Is prostitution a problem?

Contention: Prostitution is a problem to the businesses in Studio City.

Your research shows that some store owners have been complaining that their business has been negatively affected.

Issue 2: Is prostitution a significant problem?

Contention: The problem of prostitution is significant to the businesses in Studio City.

Your research shows that this problem is not with just one or two owners, it is with several owners. And you find that the problem is growing to be an even more significant problem in the future.

Issue 3: Is the prostitution problem structural or attitudinal?

Contention: The problem appears to be attitudinal, but an informative campaign would

not solve the problem.

Your research indicates that what is needed is a change in the structure, like shutting down the motel.

Issue 4: Could the current structure solve the problem? Here the question looks at the idea of increasing enforcement of current laws.

Contention: The current law was not written with the language needed to solve the problem.

Your research leads you to understand that current loitering or pandering laws are not effective in this situation.

Issue 5: Is the plan of closing down the motel workable?

Contention: The city has the legal authority to close down buildings and businesses.

Your research indicates that the city does have the legal authority to close down business that are creating problems for the community.

Issue 6: Would closing down the motel solve the problem created by the women? Contention: Without the motel, the prostitutes would have to go elsewhere.

Your research has shown that without a place to practice their trade, prostitutes would leave the area.

Issue 7: Would any ramifications be created by the plan that might outweigh the solving of the problem? Your issue here is asking, if the motel were closed, would that cause any problems.

Contention: If the motel closes homeless families will be evicted.

In this situation, there were several homeless families living in the motel. If the motel closed, they would have no place to live.

Now how would you have voted if you were on the city council?

The side advocating the claim to close down the motel had positive answers for the first six of the seven issues. The question that you must ask yourself is if the displacing of several families out-weighs the solving of the problem of the local business owners.

In this case, the families were successfully relocated making the final issue moot, or unnecessary.

5.8: Creating a Case

An organized series of contentions is called a **Case**. Now that you have your contentions that you derived from your issues, you need to decide how to order them in your argument. The Case is what you present to support your position on the claim. Bob is on trial for murder. You have answered the issues, “Did he have opportunity?” “Did he have motive”, and “Did he have access to the murder weapon?” You find the answers are yes to all three. Therefore, you argue that Bob is guilty of murder for the following three reasons; He had opportunity, he had motive and he had access to the murder weapon. **This collection of Contentions is your case**.

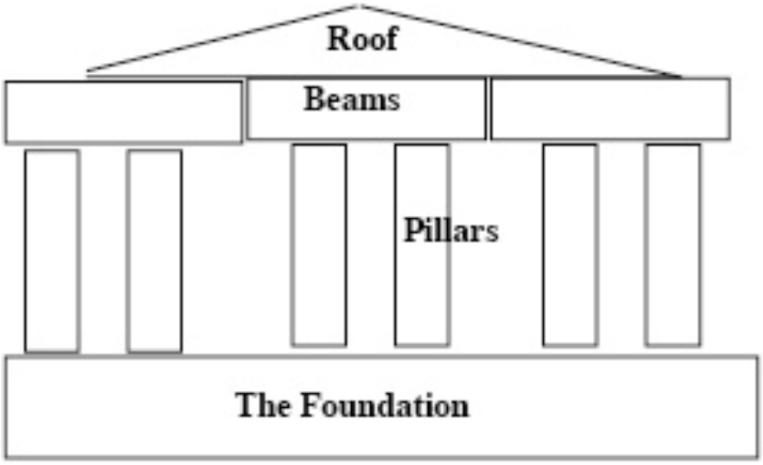
A Case is a way to structure your argument. A case is necessary any time an advocate has more than one reason to present for his or her position. As the persuasive appeal becomes more and more complex a well thought out case is crucial.

Organizing the Contentions of Your Argument

The way you order your contentions greatly depends on your audience. You are organizing your case not for what is important to you, but what is important to your audience.

Once you have an idea of who your audience is you can more easily imagine what their needs are and how your argument might meet these needs. You have selected issues that relate to them and created contentions out of the most important ones. Now it is time to organize your case. You should try to think about your persuasive argument from the perspective of your audience. Thinking about your audience before you put together your presentation can help you to determine the level of detail you need to include and how to organize information.

In other chapters, we examine effective use of evidence and the skill of reasoning or logic. It is evidence that improves your contentions from assertions to actual arguments and reasoning that links evidence with the contentions that support your position on a claim. For now, we will look at the overall structure of your argument. The following diagram of the building puts together the key parts of an argument.



5.8.1: "Argument Structure Diagram" (CC BY 4.0; J. Marteney)

Roof = Claim

Beams = Contentions

Pillars = Reasoning

Foundation = Evidence

As the diagram indicates, the roof of the building is the **Claim** that is being argued. The beams that support the roof are the **Contentions**. The foundation of the building is Evidence. **Evidence** supports the entire argument. Evidence is connected to the Contention beams through the use of **Reasoning**. Hopefully, you see in the building diagram, the Claim is not proven directly, but instead is proven through Contentions which are established through Proof, Evidence and Reasoning.

Pro-Side Strategies for Case Construction

You are on the pro-side of an argument if you are advocating the acceptance of the claim. Traditionally there are three Case approaches you can use.

Problem/solution is the first approach and probably the most used strategy in persuasive argumentation. For the pro-side, this approach suggests that a problem(s) exists in the status quo, and you have the one solution that will solve it. Problem/solution is the most traditional case approach used by the pro-side in argumentation, because it is a very clear, well defined, and understandable pattern. If the claim proposed is: **Automatic weapons should be banned**, the pro side would have to demonstrate harm in the status quo policy of legalized automatic weapons, and then would have to present a workable proposal that would eliminate that harm.

A type of problem/solution case approach is called **systems analysis**. This approach says that some program model is being used to run an interconnected system, and that the system is not functioning as it should. A proposal would then be designed to correct any flaw(s) in the system, in order to make it operational, and make the overall program function effectively. You would advocate that only by accepting your claim could the program be made effective. Without the change, the system will become dysfunctional.

If the claim being advanced is **Parents need to adopt Tough Love discipline rules in their homes**, the pro-side would try to prove that the family is a system that functions effectively, when all members are working toward a common goal, and that a breakdown in discipline is responsible for the family unit falling apart. The pro-side must then demonstrate that in adopting the **Tough Love** program, rules of child behavior will be clearly defined and the family unit will function effectively.

A second type of problem/solution case is called **goals/criteria**. This approach suggests that the currently defined goal of the target audience is not being met, and cannot be met, using current criteria (policies, beliefs, values, or institutions).

The pro-side proposes new criteria (policies, beliefs, values, or institutions) that will allow the target audience to move towards meeting its goal. If we had the claim **The death penalty is a justifiable method of criminal punishment**, we could use this approach. The pro-side would have to demonstrate that the goal of the present system is fair and equitable punishment for people convicted of capital crimes. The pro-side would then try to prove that the current punishment laws fall short of meeting this goal, and therefore a new set of laws is necessary to meet the goal.

The advantages case approach is the second case type. This choice suggests that while there may be nothing significantly wrong with the status quo, something exists that will be better than that which already exists. This approach works best when the pro- side cannot really find fault with the policies, beliefs, or institutions in the present system, but feels that their claim is better than what currently exists. The pro-side will try to persuade the audience that the advantages of the claim are significant enough to warrant adherence to the claim and move away from the “status quo.”

Advertisers use this approach frequently to market “new and improved” versions of a company’s product. The advertisements tell us that there is nothing wrong with the old version of the product, but this “new and improved” version contains features that make it better, and thus more advantageous to buy.

One way of trying to determine an appropriate advantages case is to examine the priorities of the target audience. The pro-side would need to prove that the claim it is advancing deserves higher priority status than any other competing claim. The pro-side must convince the target audience that only by granting adherence to the claim can it get its priorities in order.

Assume that one of the priorities of the audience is economic independence. If the claim being advanced is **Adults should increase the amount of money they put in their IRS**, the pro-side would want to demonstrate that even though their current contributions are a good start, additional contributions will make their economic future much better and thus be an improvement in their current investment strategy.

Residues is the third case approach. This approach says that a certain number of alternatives exist to deal with any problem, meet any goal, or make any problem work. Of these alternatives, all are unacceptable but one. Since this one is the only one left, it should be accepted.

Assume we are arguing the claim, **People should use Uber**. The pro-side would try to prove that three, and only three, alternatives are available and two are unacceptable. “You can either use Uber, use a taxi, or walk. Since walking takes too long and taxis are too expensive, the only alternative left is to use Uber.”

The residues approach is commonly used by people trying to sell you some sort of program; diet program, insurance program, cell phone program etc. A diet program salesperson may offer you only three choices: starve yourself to lose those unwanted pounds, try an unhealthy liquid diet program, or join our medically safe, delicious diet meals program. The salesperson never proves that

the last choice is best; he/she just argues that the other options are undesirable. When faced with this type of argument, check to see if there are additional alternatives that the advocate is leaving out.

Organizing your case is not just for the pro-side. The side disagreeing with the claim also organizes their argument using the contentions they have discovered through research and analysis. Both sides follow the same process when developing an argumentative strategy.

5.8.2: "Christopher Hitchens" (CC BY 2.0; Jose Ramirez via Wikimedia Commons)

> "*Forgotten were the elementary rules of logic, that extraordinary claim require extraordinary evidence and that what can be asserted without evidence can also be dismissed without evidence.*" [1] — Christopher Hitchens
>
> *Quod gratis asseritur, gratis negatur, or what can be asserted without evidence can be dismissed without evidence. — Christopher Hitchens*

Reference

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5.9: Quick Review

Five Steps are used when creating an effective argumentative strategy:

- Challenging your assumptions. What you initially think of the situation just might be wrong.
- Conducting research, and/or brainstorming, and/or analysis to discover as many potential issues on a claim that time will allow.
- Narrowing potential issues by finding the admitted issues, considering the real issues, and selecting the ultimate issues.
- Turning the ultimate issues from questions into statements and advancing these statements as the contentions for your advocated position.
- Organizing your contentions into a case by making them the center of the debate on the claim and arguing them using evidence and reasoning.

Each day people make a variety of claims concerning their beliefs about people, events, and things in their life. We live in a world where opinions and assertions of all types are made in just about every environment we enter. We engage in arguments with others over a variety of topics and subjects.

Yet, without the requirement that a stand on a claim be justified, our arguments would come down to a "Yes, it is," "No it isn't" squabble. The goal of any arguer, from the courtroom to the boardroom to any legislative body to writing an argumentative essay in college, is to present the very best arguments to defend their stand on a claim.

Effective argumentation allows advocates to present reasonable and responsible arguments in defense of the stand they are advocating. As James Sawyer writes,

> *"Meaningful argumentative communication requires that the argument be grounded upon substantive items or issues, the very foundation of rational argumentative encounters. By carefully examining what you already know through brainstorming and analysis, and then by conducting specific research, you will discover the major issues."*

Persuasive communication is the process through which people attempt to influence the beliefs or actions of others. At one time or another all of us have tried to persuade someone to do something, and we have all met with varying degrees of success. For persuasive communication to be effective, certain principles must be followed or the attempt can backfire and cause more resistance to engaging in the target behavior.

Since Aristotle recorded his principles of persuasion in the Rhetoric, humans have attempted to define and refine the principles of successful influence. Persuasion has been studied as an art for most of human history.

As Dr. Marvin Glock of Cornell University puts it,

> *"In seeking the cooperation of other people, the basic steps are to define a goal, to obtain others' agreement to work toward that goal, and to provide the support and revisions needed during the project to keep it moving toward your desired end goal."*

5.10: The Focus of this Chapter

This chapter focuses on the process critical thinkers use to discover what contentions or arguments they will present in order to persuade an audience to grant adherence to the position they are advocating. One of the key skills needed by the critical thinker is the ability to ask quality questions of the claim being argued.

- **In an argument, the questions we ask are known as "Issues."**
- **Issues are single, specific, unbiased questions** whose answer allows us to make a decision on the claim.
- **There are different types of issues for different types of claims.**
- **An answer to your issue is known as a contention.**
- **In an argument, you do not directly prove your claim.** Instead you prove your contentions. By proving your contentions, you prove your claim.
- **An organized set of contentions is known as a "Case."** There are a variety of ways a case can be organized from "Problem Solution" to "Needs."

Building the structure of your case is the first step in creating an argument that can persuade others. In the next chapter we look at Evidence and how it is used to support that argument. Without evidence, we are just making assertions. There is an old 19th century Latin phrase that says, "*Quod gratis asseritur, gratis negatur*" which is translated as "*what is freely asserted is freely dismissed*." Building on this a journalist named Christopher Hitchens wrote what is now known as Hitchens's Razor, which as we see below, again emphasizes the burden of proof.

5.10.1: "Razor Shaving Sharp" (CC0 1.0; OpenClipart-Vectors via Needpix.com, edited by J. Marteney)

Any amateur can find the answer to a question.

It is the expert who knows what questions to ask.

CHAPTER OVERVIEW

6: Evidence

6.1: The Building Blocks of an Argument

"Everyone is entitled to his own opinion, but not to his own facts"

--Daniel Patrick Moynihan

6.1.1: "Napoleon Boneparte" by Unkown is licensed under CC BY-SA 4.0

After the death of the famous French leader, Napoleon Bonaparte , an autopsy was performed and the doctors announced that he had died of a perforated stomach ulcer that had turned cancerous. Some of his supporters did not believe this. They were convinced he was murdered. Their beliefs were fueled by the fact that Napoleon himself had written that he was being poisoned. What evidence existed to support his accusations?

Fortunately, from his wishes in his will, many relatives were given strands of his hair that could be tested. One hundred years after his death Napoleon's hair was tested and the results indicated that Napoleon had a degree of arsenic in his body. This raw data seemed to suggest that he was poisoned. But 20 years later a second interpretation of the data suggested that he was killed by his wallpaper.

In the 1800's a type of wallpaper that used a color call Scheele Green, was made with lead. That lead gave off arsenic compounds that could be absorbed by the human body and eventually effecting the health of that person. Napoleon's room had this wallpaper.

But a third interpretation indicated that the wallpaper did not contain enough arsenic to kill Napoleon, but it did contain enough to exacerbate a stomach ulcer which eventually killed him. So, although the wallpaper wasn't the ultimate killer, it did seem to contribute to Napoleon's death. The conclusion indicated that Napoleon Bonaparte was not intentionally poisoned.

This story illustrates two important aspects of evidence,

- The quality of evidence
- The accurate interpretation of evidence

Both of which we will explore in this chapter.

6.2: Defining Evidence

What is evidence? According to Reike and Sillars, *"Evidence refers to specific instances, statistics, and testimony, when they support a claim in such a way as to cause the decision maker(s) to grant adherence to that claim."* [1]

6.2.1: "Evidence" by Nick Youngson is licensed under CC BY-SA 3.0

Evidence is information that answers the question "*How do you know*?**"** of a contention you have made. Please take that question very literally. It is often hard to tell the difference at first between telling someone what you know and telling them how you know it. To become an effective arguer in almost any context, you need to be able to ask this question repeatedly and test the answers you hear to determine the strength of the evidence.

Only experts can use phrases like "I think" or "I feel" or "I believe" as they have the qualifications needed that allow you to accept their observations. As for everyone else, we need to use evidence to support our arguments. As a critical thinker, you should rely much more on what a person can prove instead of what a person "feels."

Evidence is a term commonly used to describe the supporting material used when persuading others. Evidence gives an objective support to your arguments, and makes your arguments more than a mere collection of personal opinions or prejudices. No longer are you saying, "*I believe*" or "*I think*" or "*In my opinion*." Now you can support your assertions with evidence. Because you are asking your audience to take a risk when you attempt to persuade them, audiences will demand support for your assertions. Evidence needs to be carefully chosen to serve the needs of the claim and to reach the target audience.

An argument is designed to persuade a resistant audience to accept a claim via the presentation of evidence for the contentions being argued. Evidence establishes the amount of accuracy your arguments have. Evidence is one element of proof (the second is reasoning), that is used as a means of moving your audience toward the threshold necessary for them to grant adherence to your arguments.

Quality argumentation depends in part on the quantity and diversity of evidence. The arguer should expect audiences to not be persuaded by limited evidence or by a lack of variety/scope, evidence drawn from only one source as opposed to diverse sources. On the other hand, too much evidence, particularly when not carefully crafted, may leave the audience overwhelmed and without focus. Evidence in support of the different contentions in the argument needs to make the argument reasonable enough to be accepted by the target audience.

Challenge of Too Much Evidence

I attended a lecture years ago where the guest speaker told us that we have access to more information in one edition of the New York Times than a man in the middle ages had in his entire life time. The challenge is not finding information, the challenge is sorting through information to find quality evidence to use in our arguments and decision-making. In his book, "Data Smog, Surviving the Information Glut", David Shenk expresses his concern in the first chapter:

> *"Information has also become a lot cheaper--to produce, to manipulate, to disseminate. All of this has made us information-rich, empowering Americans with the blessings of applied knowledge. It has also, though, unleashed the potential of information-gluttony...How much of the information in our midst is useful, and how much of it gets in the way? ...*
>
> *As we have accrued more and more of it, information has emerged not only as a currency, but also as a pollutant."*

- In 1971 the average American was targeted by at least 560 daily advertising messages. Twenty years later, that number had risen six- fold, to 3,000 messages per day.

- In the office, an average of 60 percent of each person's time is now spent processing documents.
- Paper consumption per capita in the United States tripled from 1940 to 1980 (from 200 to 600 pounds), and tripled again from 1980 to 1990 (to 1,800 pounds).
- In the 1980s, third-class mail (used to send publications) grew thirteen times faster than population growth.
- Two-thirds of business managers surveyed report tension with colleagues, loss of job satisfaction and strained personal relationships as a result of information overload.
- More than 1,000 telemarketing companies employ four million Americans, and generate $650 billion in annual sales.

Let us call this unexpected, unwelcome part of our atmosphere "data smog," an expression for the noxious muck and druck of the information age. Data smog gets in the way; it crowds out quiet moments, and obstructs much-needed contemplation. It spoils conversation, literature, and even entertainment. It thwarts skepticism, rendering us less sophisticated as consumers and citizens. It stresses us out." [2]

We need ways of sorting through this information and the first method is understanding the different types of evidence that we encounter.

Sources of Evidence

The first aspect of evidence we need to explore is the actual source of evidence or where we find evidence. There are two primary sources of evidence; primary and secondary.

Primary Sources

A primary source provides direct or firsthand evidence about an event, object, person, or work of art. Primary sources include historical and legal documents, eyewitness accounts, results of experiments, statistical data, pieces of creative writing, audio and video recordings, speeches, and art objects. Interviews, surveys, fieldwork, and Internet communications via email, blogs, tweets, and newsgroups are also primary sources. In the natural and social sciences, primary sources are often empirical studies—research where an experiment was performed or a direct observation was made. The results of empirical studies are typically found in scholarly articles or papers delivered at conferences. [3]

Included in primary sources:

- Original, first-hand accounts of events, activity or time period
- Factual accounts instead of interpretations of accounts or experiments
- Results of an experiment
- Reports of scientific discoveries
- Results of scientifically based polls

Secondary Sources

Secondary sources describe, discuss, interpret, comment upon, analyze, evaluate, summarize, and process primary sources. Secondary source materials can be articles in newspapers or popular magazines, book or movie reviews, or articles found in scholarly journals that discuss or evaluate someone else's original research. [4]

Included in secondary sources:

- Analyzation and interpretation of the accounts of primary sources
- Secondhand account of an activity or historical event
- Analyzation and interpretation of scientific or social research results

The key difference between the two sources is how far the author of the evidence is removed from the original event. You want to ask, "*Is the author giving you a firsthand account, or a secondhand account?*"

Types of Evidence

There are **five** types of evidence critical thinkers can use to support their arguments: **precedent evidence, statistical evidence, testimonial evidence, hearsay evidence, and common knowledge evidence**.

Precedent evidence is an act or event which establishes expectations for future conduct. There are two forms of precedent evidence: legal and personal.

Legal precedent is one of the most powerful and most difficult types of evidence to challenge. Courts establish legal precedent. Once a court makes a ruling, that ruling becomes the legal principle upon which other courts base their actions. Legislatures can also establish precedent through the laws they pass and the laws they choose not to pass. Once a principle of law has been established by a legislative body, it is very difficult to reverse.

Personal precedents are the habits and traditions you maintain. They occur as a result of watching the personal actions of others in order to understand the expectations for future behaviors. Younger children in a family watch how the older children are treated in order to see what precedents are being established. Newly employed on a job watch to see what older workers do in terms of breaks and lunchtime in order that their actions may be consistent. The first months of a marriage is essentially a time to establish precedent. Who does the cooking, who takes out the garbage, who cleans, which side of the bed does each person get, are precedents established early in a marriage. Once these precedents are displayed, an expectation of the other's behavior is established. Such precedent is very difficult to alter.

To use either type of precedent as evidence, the arguer refers to how the past event relates to the current situation. In a legal situation, the argument is that the ruling in the current case should be the same as it was in the past, because they represent similar situations. In a personal situation, if you were allowed to stay out all night by your parents "just once," you can use that "just once" as precedent evidence when asking that your curfew be abolished.

Statistical evidence consists primarily of polls, surveys, and experimental results from the laboratory. This type of evidence is the numerical reporting of specific instances. Statistical evidence provides a means for communicating a large number of specific instances without citing each one. Statistics can be manipulated and misused to make the point of the particular advocate.

Don't accept statistics just because they are numbers. People often fall into the trap of believing whatever a number says, because numbers seem accurate. Statistics are the product of a process subject to human prejudice, bias, and error. Questions on a survey can be biased, the people surveyed can be selectively chosen, comparisons may be made of non-comparable items, and reports of findings can be slanted. Take a look at all the polls that predict an election outcome. You will find variances and differences in the results.

Statistics have to be interpreted. In a debate over the use of lie detector tests to determine guilt or innocence in court, the pro-side cited a study which found that 98% of lie detector tests were accurate. The pro-side interpreted this to mean that lie detector tests were an effective means for determining guilt or innocence. However, the con-side interpreted the statistic to mean that two out of every 100 defendants in this country would be found guilty and punished for a crime they did not commit.

6.2.2: "Scully" by Floatjon is licensed under CC BY-SA 3.0

The great baseball announcer Vin Scully once described the misuse of statistics by a journalist by saying that "*He uses statistics like a drunk uses a lamppost, not for illumination but for support*

Statistics are often no more reliable than other forms of evidence, although people often think they are. Advocates need to carefully analyze how they use statistics when attempting to persuade others. Likewise, the audience needs to question statistics that don't make sense to them.

Testimonial evidence is used for the purpose of assigning motives, assessing responsibilities, and verifying actions for past, present and future events. Testimony is an opinion of reality as stated by another person. There are three forms of **testimonial evidence: eyewitness, expert-witness, and historiography.**

Eyewitness testimony is a personal declaration as to the accuracy of an event. That is, the person actually saw an event take place and is willing to bear witness to that event. Studies have confirmed that eyewitness testimony, even with all of its problems, is a

powerful form of evidence. There seems to be almost something "magical" about a person swearing to "tell the whole truth and nothing but the truth."

Expert-witness evidence calls upon someone qualified to make a personal declaration about the nature of the fact in question. Courts of law make use of experts in such fields as forensics, ballistics, and psychology. The critical thinker uses the credibility of another person to support an argument through statements about the facts or opinions of the situation.

What or who qualifies as an expert witness? Does being a former military officer make them an expert in military tactics? Often an advocate will merely pick someone who they know the audience will accept. But as an audience we should demand that advocates justify the expertise of their witness. As we acquire more knowledge, our standards of what constitutes an expert should rise. We need to make a distinction between sources that are simply credible like well-known athletes and entertainers that urge you to buy a particular product, and those who really have the qualities that allow them to make a judgment about a subject in the argumentative environment.

Although expert witness testimony is an important source of evidence, such experts can disagree. In a recent House Energy and Commerce subcommittee, two experts gave opposite testimony, on the same day, on a bill calling for a label on all aspirin containers warning of the drug's often fatal link to Reye's Syndrome. The head of the American Academy of Pediatrics gave testimony supporting the link, but Dr. Joseph White, President of The Aspirin Foundation of America, said there was insufficient evidence linking aspirin to Reye’s syndrome.

Historiography is the third form of testimonial evidence. In their book, ARGUMENTATION AND ADVOCACY, Windes and Hastings write, *"Historiographers are concerned in large part with the discovery, use, and verification of evidence. The historian traces influences, assigns motives, evaluates roles, allocates responsibilities, and juxtaposes events in an attempt to reconstruct the past. That reconstruction is no wiser, no more accurate or dependable than the dependability of the evidence the historian uses for his reconstruction."* [5]

Keep in mind that there are many different ways of determining how history happens. Remember, historians may disagree over why almost any event happened. In the search for how things happen, we get ideas about how to understand our present world's events and what to do about them, if anything.

Primary sources are essential to the study of history. They are the basis for what we know about the distant past and the recent past. Historians must depend on other evidence from the era to determine who said what, who did what, and why.

How successful is the historian in recreating “objective reality?" As noted historian Arthur Schlesinger, Jr. says,

> *“The sad fact is that, in many cases, the basic evidence for the historian’s reconstruction of the really hard cases does not exist, and the evidence that does exist is often incomplete, misleading, or erroneous. Yet, it is the character of the evidence which establishes the framework within which he writes. He cannot imagine scenes for which he has no citation, invent dialogue for which he has no text, assume relationships for which he has no warrant.”*

Historical reconstruction must be done by a qualified individual to be classified as historical evidence. Critical thinkers will find it useful to consider the following three criteria for evaluating historical evidence.

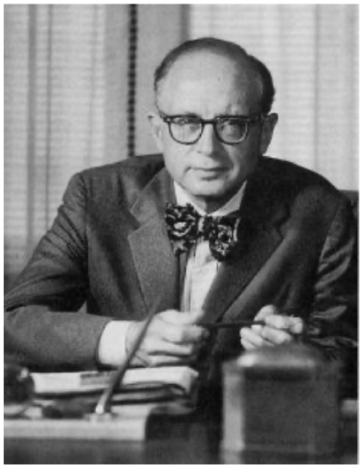
> Around 1,000 books are published internationally every day and the total of all printed knowledge doubles every 5 years.
>
> More information is estimated to have been produced in the last 30 years than in the previous 5,000.
>
> ----The Reuters Guide to Good Information Strategy 2000

Was the author an eyewitness to what is being described, or is the author considered an authority on the subject? Eyewitness accounts can be the most objective and valuable but they may also be tainted with bias. If the author professes to be an authority, he/she should present his/her qualifications.

Does the author have a hidden agenda? The author may purposely or unwittingly tell only part of the story. The excerpt may seem to be a straight-forward account of the situation, yet the author has selected certain facts, details, and language, which advance professional, personal or political goals or beliefs. They may be factual, but the hidden agenda of these books was to make money for the author, or get even with those in the administration they didn't like.

Does the author have a bias? The author's views may be based on personal prejudice rather than a reasoned conclusion based on facts. Critical thinkers need to notice when the author uses exaggerated language, fails to acknowledge, or dismisses his or her opponents' arguments. Historians may have biases based on their political allegiance. Conservative historians would view events

differently than a liberal historian. It is important to know the **political persuasion** of the historian in order to determine the extent of bias he or she might have on the specific topic they are writing about.



"6.2.3: "Daniel Boorstin" by Unkown is in the Public Domain, CC0

Sometimes we think we might know our history, but Historian Daniel Boorstin puts a perspective on the ultimate validity and accuracy of historical testimony when he writes, *"Education is learning what you didn't even know you didn't know."* Modern techniques of preserving data should make the task of recreating the past easier and adding to our education.

Hearsay evidence (also called rumor or gossip evidence) can be defined as an assertion or set of assertions widely repeated from person to person, though its accuracy is unconfirmed by firsthand observation. "Rumor is not always wrong," wrote Tacitus, the Roman historian. A given rumor may be spontaneous or premeditated in origin. It may consist of opinion represented as fact, a nugget of accuracy garbled or misrepresented to the point of falsehood, exaggerations, or outright, intentional lies. Yet, hearsay may well be the "best available evidence" in certain situations where the original source of the information cannot be produced.

Rumor, gossip or hearsay evidence carries proportionately higher risks of distortion and error than other types of evidence. However, outside the courtroom, it can be as effective as any other form of evidence in proving your point. Large companies often rely on this type of evidence, because they lack the capability to deliver other types of evidence.

A recent rumor was started that actor Morgan Freeman had died. A page on “Facebook” was created and soon gained more that 60,000 followers, after it was announced that the actor had passed away. Many left their condolences and messages of tribute. Only one problem, Morgan Freeman was very much alive, actually that is not so much a problem, especially to Morgan Freeman. The Internet is a very effective tool when it comes to spreading rumors.

Common knowledge evidence is also a way to support one’s arguments. This type of evidence is most useful in providing support for arguments which lack any real controversy. Many claims are supported by evidence that comes as no particular surprise to anyone.

Basing an argument on common knowledge is the easiest method of securing belief in an idea, because an audience will accept it without further challenge. As Communication Professors Patterson and Zarefsky explain:

> *“Many argumentative claims we make are based on knowledge generally accepted by most people as true. For example, if you claimed that millions of Americans watch television each day, the claim would probably be accepted without evidence. Nor would you need to cite opinions or survey results to get most people to accept the statement that millions of people smoke cigarettes."* [6]*(Patterson, 1983)*

Credibility of Evidence or How Good Is It?

In order to tell us how you know something, you need to tell us where the information came from. If you personally observed the case you are telling us about, you need to tell us that you observed it, and when and where. If you read about it, you need to tell us where you read about it. If you are accepting the testimony of an expert, you need to tell us who the expert is and why she is an expert in this field. The specific identity, name or position and qualifications of your sources are part of the answer to the question “How do you know?” You need to give your audience that information.

Keep in mind that it is the person, the individual human being, who wrote an article or expressed an idea who brings authority to the claim. Sometimes that authority may be reinforced by the publication in which the claim appeared, sometimes not. But when you quote or paraphrase a source you are quoting or paraphrasing the author, not the magazine or journal. The credibility of the evidence you use can be enhanced by:

Specific Reference to Source: Does the advocate indicate the particular individual or group making the statements used for evidence? Does the advocate tell you enough about the source that you could easily find it yourself?

Qualifications of the Source: Does the advocate give you reason to believe that the source is competent and well-informed in the area in question?

Bias of the Source: Even if an expert, is the source likely to be biased on the topic? Could we easily predict the source's position merely from knowledge of his job, her political party, or organizations he or she works for?

Factual Support: Does the source offer factual support for the position taken or simply state personal opinions as fact?

Evaluating Internet Sources of Evidence

We currently obtain a significant amount of the evidence we use in an argument from the Internet. Some people are still under the influence that if they read it on the Internet, it must be accurate. But we all know that some Internet sources are better than others. We need to be able to evaluate websites to obtain the best information possible. Here are two approaches to evaluating websites

Who, What, When, Where, and Why

This first test is based on the traditional 5 "W's." These questions, like critical thinking, go back to Greek and Roman times. The notable Roman, Cicero, who was in office in 63 BC, is credited with asking these questions

Journalists are taught to answer these five questions when writing an article for publication. To provide an accurate interpretation of events to their viewers or readers, they ask these five questions and we can ask the same questions to begin discovering the level of quality of an online source.

Who wrote the post? What are their qualifications?

What is actually being said in the website. How accurate is the content?

When was the website's latest post?

Where is the source of the post? Does the URL suggest it is from an academic source or an individual?

Why is the website published? Is the website there to inform or entertain?

There is a second method of evaluating websites that is more popular and includes a more in depth analysis. This method is known as the CRAAP test.

The C.R.A.A.P. Test

C.R.A.A.P. is an acronym standing for Currency, Relevance, Authority, Accuracy, and Purpose. Developed by the Meriam Library at the California State University at Chico, each of these five areas is used to evaluate websites.

Currency How recent is this website. If you are conducting research on some historical subject a web site that has no recent additions could be useful. If, however you are researching some current news story, or technology, or scientific topic, you will want a site that has been recently updated.

Questions to Ask:

- When was the content of the website published or posted?
- Has the information been revised or updated recently?
- Have more recent articles on your subject been published?
- Does your topic require the most current information possible, or will older posts and sources be acceptable?
- Are the web links included in the website functional?
- **Relevance** This test of a website asks you how important is the information to the specific topic you are researching. You will want to determine if you are the intended audience and if the information provided fits your research needs.

Questions to Ask:

- Does the content relate to your research topic or the question you are answering?

- Who is the intended audience?
- Is the information at an appropriate level for the purpose of your work? In other words, is it college level or targeted to a younger or less educated audience?
- Have you compared this site to a variety of other resources?
- Would you be comfortable citing this source in your research project?

Authority Here we determine if the source of the website has the credentials to write on the subject which makes you feel comfortable in using the content. If you are looking for an accurate interpretation of news events, you will want to know if the author of the website is a qualified journalist or a random individual reposting content.

Questions to Ask:

- Who is the author/ publisher/ source/ sponsor of the website?
- What are the author's credentials or organizational affiliations?
- Does the author have the qualifications to write on this particular topic?
- Can you find information about the author from reference sources or the Internet?
- Is the author quoted or referred to on other respected sources or websites?
- Is there contact information, such as a publisher or email address?
- Does the URL reveal anything about the author or source?

Accuracy In this test we attempt to determine the reliability and accuracy of the content of the website. You need to determine if you can trust the information presented in the website or is it just slanted, personal beliefs.

Questions to Ask:

- Where does the information in the website come from?
- Is the information supported by Evidence, or is it just opinion?
- Has the information presented been reviewed by qualified sources?
- Can you verify any of the content in another source or personal knowledge?
- Are there statements in the website you know to be false?
- Does the language or tone used in the website appear unbiased or free of emotion or loaded language?
- Are there spelling, grammar or typographical errors in the content of the website?

Purpose Finally we examine the purpose of the website. We need to determine if the website was created to inform, entertain or even sell a product or service. If we want accurate, high quality evidence, we would want to avoid a site that is trying to sell us something. Although a company selling solar power may have some factual information about solar energy on their site, the site is geared to sell you their product. The information they provide is not there to educate you with all aspects of solar power.

Questions to Ask:

- What is the purpose of the content of this website? Is the purpose to inform, teach, sell, entertain or persuade?
- Do the authors/sponsors of the website make their intentions or purpose clear?
- Is the content in the website considered facts, opinion, or even propaganda?
- Does the point of view appear objective and impartial?
- Does the author omit important facts or data that might disprove the claim being made in the post?
- Are alternative points of view presented?
- Does the content of the website contain political, ideological, cultural, religious, institutional or personal biases?

Questions used here are inspired from questions from the Meriam Library at California State University Chico, the University of Maryland University College Library and Creighton University Library

6.2.4: "Question Mark on Face" is in the Public Domain, CC0

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6.3: Checking on the Domain Indicators

Every website address ends with a domain indicator. This graphic illustrates four of them. Understanding each domain indicator can help us better understand the quality of the website.

What follows is a list of domain indicators from most reliable to least reliable sites. The sites at the top of the list are considered more trustworthy than those towards the bottom of the list.

.gov This is the site that is restricted for use of federal, state and local governments only. And yes, here I am saying that the government is to be trusted. These sites are reviewed for accuracy by individuals and agencies.

.edu Since 2001, these sites have been restricted for use of U.S. educational institutions of higher education. The content on this site will not only be written by people associated by that institution, but will be subject to review by that institution.

.org Although we think of this as a domain indicator for an organization, anyone can obtain this domain indicator. And even if it is an organization, you need to check the credibility of that organization.

.com Any individual can obtain this domain indicator and publish a site. There are no review boards to evaluate the content that is in this site.

.net As with .com, any individual can obtain this domain indicator.

6.4: Using Evidence

In his book, ARGUMENTATION AND DEBATE, Austin J. Freeley discusses the uses of evidence. He says that the various types of evidence can be used in two ways:

To establish Conclusive Proof for your position. Conclusive proof is using evidence that is strong and convincing enough to override any objections to it. This evidence is so strong that the law will not permit it to be contradicted.

Often the argumentative environment will define what type of evidence is needed to establish your arguments to the defined threshold of that environment. For example, fingerprints at the crime scene may be the conclusive proof needed to find a person guilty of that crime. For a scientist to prove a hypothesis they need an experiment to reach a 95% certainty threshold. That is, they need to be 95% certain of the results. If the experiment by the scientist reaches this level, this would be conclusive proof.

To establish Circumstantial Proof for your position. This is where the various types of evidence are used to form a link strong enough to prove your point. Using the different types of evidence as support gives the argument the strength needed to establish the accuracy of your argument. The evidence is put together in such a manner so as to create an evidence chain. One bit of evidence is connected to another, and so on. Each piece of evidence, in and of itself, is not enough to reach the threshold of your audience for accepting your argument, but taken altogether, the accuracy of the claim can be established. [1]

Many Americans hold the incorrect view that circumstantial evidence cannot be used to convict someone in a court of law. In fact, more convictions are based on circumstantial proof than on conclusive proof.

How Much Evidence is Necessary?

All good arguments must be supported by a strong foundation of evidence. An argument filled with no supporting evidence is merely an assertion. It is instead a collection of interpretations or beliefs, and the audience will have no reason to believe the interpretations or beliefs if they are not well supported with evidence.

How much evidence do you need to support each contention that you make in support of your stand on a claim? Good question. To some extent, the amount of evidence needed depends on the degree of controversy of the claim you are trying to support and your credibility as an advocate. Thus, how much evidence an advocate needs to present is ultimately determined by the demands of his or her target audience. Since evidence must ultimately be persuasive to an audience, arguers must adjust their usage of evidence for maximum appeal. An advocate must deal with one of the following audience types:

A **friendly audience** is one that already supports an advocate's position on a claim. Audience members are already predisposed to granting adherence to the position, so very little additional evidence is needed as support.

A **neutral audience** is one that has made no commitment to granting adherence to the advocated point of view. Audience members are "fence sitting," waiting to see what type of support can be provided in order to move them over to one side or the other. The quality of the evidence used is important to this type of audience.

A **hostile audience** is one that is opposed to the advocate's point of view. Audience members are already predisposed to reject the advocated point of view. In this case, a great deal of high-quality evidence is needed in order to move audience members off their existing position.

Tests of Evidence

You have evidence that you plan to use in your arguments. The key question for you, because it will be a key question for your audience, is whether the evidence is accurate, whether you can trust it. Unless you are reporting your own personal experience directly to us, your evidence comes from somebody else.

If you use the word of some other person or group to answer the question "How do you know?" it just moves the question back a step: How do they know? Even if you understand them, and they were correct as they saw it, they may have been just plain wrong. If you really care about the accuracy or correctness of what you are reporting, then you have to have some way of checking the reliability of your sources. In reviewing evidence, you can use a few tests that are widely used to evaluate evidence.

Recency: Is the evidence too old to be of current relevance to the issue? Would the source have had knowledge of recent developments or discoveries that might have bearing on the issue?

Sufficiency: Is there enough evidence to justify all of the claims being made from it?

Logical Relevance: Does the claim made in the evidence provide a premise which logically justifies the conclusion offered? Can you reasonably draw the conclusion being urged based on what the evidence says?

Internal Consistency: Does this source make claims that are contradicted by other claims from the same source?

External Consistency: Are the claims made by this source consistent with general knowledge and other evidence? If not, does the writer account for this discrepancy? If printed, can it be found? If not in print format, can you provide citation as to time, place and date?

Reference

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6.5: Testing of Fake News Sources

There has always been fake news, but with the advent of social media, posted news does not have to go through any editorial board to be published. Anyone with a computer and an Internet connection can publish what they refer to as the “news,” and that “news” is easily passed along and eventually believed by many.

Facebook contributes to this as their algorithm records what you like or interact with and shows you more content that is related to your interest. If you like a meme showing how foolish a particular candidate supposedly is, then more, similar memes will appear on your Facebook site.

Because of the viral nature of these fake news reports, both Google and Facebook are attempting to reduce their impact by decreasing the amount of revenue these fake news sources can generate.

There are different types of misleading and false news as described below by AJ Willingham, CNN news:

Fake news These are the easiest to debunk and often come from known sham sites that are designed to look like real news outlets. They may include misleading photographs and headlines that, at first read, sound like they could be real.

Misleading news These are the hardest to debunk, because they often contain a kernel of truth: A fact, event or quote that has been taken out of context. Look for sensational headlines that aren't supported by the information in the article.

Highly partisan news A type of misleading news, this may be an interpretation of a real news event where the facts are manipulated to fit an agenda.

Clickbait The shocking or teasing headlines of these stories trick you into clicking for more information -- which may or may not live up to what was promised.

Satire This one is tough, because satire doesn't pretend to be real and serves a purpose as commentary or entertainment. But if people are not familiar with a satire site, they can share the news as if it is legitimate.[1]

As Willingham described **click-bait,** The purpose of these sites is to get viewers because the owner then makes money with all the accompanying advertisements. The more people who view the site, the more money the owner makes.

And don't forget the problem with other countries posting on the web in order to spread propaganda and create dissension. We need to be on guard as other countries interfere with our internal affairs.

We need to be more skeptical. You may have seen a meme during the 2016 election that had a picture of a young Donald Trump with his alleged quote:

> *"If I were to run, I'd run as a Republican. They're the dumbest group of voters in the country. They believe anything on Fox News. I could lie and they'd still eat it up. bet my numbers would be terrific."*

People who disliked Trump would re-post this in hopes of getting Republican voters to also dislike him and not vote for him. This quote was allegedly from a People Magazine interview in 1998. But looking through the People Magazine archives this quote is nowhere to be found. This statement was totally made up. Were you fooled by it?

The good news is that there are several, relatively simple steps we can take. The following are questions from both FactCheck.org and CNN you can ask to make sure you are not being manipulated by **Fake News**.

Does the story, article or meme originate from a strange looking web address? Check and see if the url has a **.co** or **.su**, or is hosted by a free web site like Weebly or Wordpress. It was reported on abcnews.com.co that President Obama had signed an order banning assault weapon sales. Now look at that url again and you will see the **.co** at the very end. This was a **“Fake New** story.

Does the article match the Headline? Often people will just read the headline and repost the article. By reading the article you might see a very different story. I once read a headline stating that Congress was going to impeach President Obama. But the article just said that one member of congress was thinking about filing the articles of impeachment.

Is the article recent or is it an old one that has been re-purposed. CNN once reported that “A blog called Viral Liberty recently reported that Ford had moved production of some of their trucks from Mexico to Ohio because of Donald Trump’s election win.” Actually, this had been done a year before and had nothing to do with the election.

Do the supporting videos and photos relate to the article? You want to verify that the picture actually relates to the article or is it taken out of context. After the 2016 Presidential election, many anti-Trump protests were staged. There was a picture of a person

defecating in the street with the caption referring to the classlessness of liberals.

It turns out the picture was taken years earlier in an entirely different event. But it was reposted many times.

Does the article cite primary source? Check and see the actual source of a news article. Is it just the website who says so? Do they cite any credible sources? One fake news site, Now8News, is one of those fake sites that look real. As I am writing this, one of their lead stories is that Melania Trump is divorcing Donald Trump. Just because a site looks professional, doesn't make the evidence accurate.

Can you Trace the Quotes you are reading? Often you will see a key figure making a quote that just does not sound believable. Check the quote. Put the quote in Google and see if it comes up somewhere else.

Are there any other news outlets reporting the story? Check to see if there are other, legitimate, news sources reporting the same story. Google the story and select the "News" option. You can see other sources, if there are any, for that story. And make sure they are legitimate. Remember, USAToday.com.co is not a legitimate source with that .**co** at the end.

Is your own personal bias getting in your way? This is a very big influential factor for the success of **Fake News**. As stated in FactCheck.org,

> "*We know this is difficult. Confirmation bias leads people to put more stock in information that confirms their beliefs and discount information that doesn't. But the next time you're automatically appalled at some Facebook post concerning, say, a politician you oppose, take a moment to check it out.*" [2]

It is human nature. The more you hate a particular politician, let's say, Hillary Clinton, the more you will want to believe negative stories about her, no matter how outrageous they may be. A critical thinker needs to fight that human urge.

Has the article been debunked by a reputable fact-checking organization? There are many fact-checking organizations around the world that will help you determine the validity and accuracy of news stories. One excellent website is the "International Fact-Checking Network." On their website is a list of international fact-checking sites including the most popular ones in the Unites States[3]:

- Factcheck.org
- PolitiFact
- Snopes
- The Washington Post Fact Checker
- FactCheck Georgia

Is the web host of the article on a list of unreliable news websites? There are a couple of places that have lists of these dubious websites. One is at Snopes and another is a growing document titled "False, Misleading, Clickbait-y, and/or Satirical "news" Sources."*(Zimbars, 2016)* This is an extensive and growing document that describes hundreds of fake news sites and how to analyze them. The challenge with these sites is the determination of which ones are based on some factual information and which ones are total fiction made to sound like fact.

AJ Willingham from CNN urges us to "hone your fact-checking skills." And she cites two experts in the field.

Alexios Mantzarlis trains fact-checkers for a living. He says it's important to have a "*healthy amount of skepticism*" and to think, really think, before sharing a piece of news.

"*If we were a little slower to share and re-tweet content purely based on the headline, we'd go a good way towards combating falsehoods*," he told CNN.

Melissa Zimdars, Communication Professor at Merrimack College, points out that even those who spend a lot of time online aren't immune to fake content.

> "*People think this [thinking] applies only for older people," she told CNN. "I think even early education should be teaching about communication, media and the internet. Growing up with the internet doesn't necessarily mean you are internet savvy*." [4]

Facebook has become a major source of information for many people. Recently Facebook posted a list of strategies a person can use to analyze articles to see if they might be an example of false news.

Facebook states, "*We want to stop the spread of false news on Facebook. As we work to limit the spread, here are some tips on what to look out for":*

Be skeptical of headlines. False news stories often have catchy headlines in all caps with exclamation points. If shocking claims in the headline sound unbelievable, they probably are.

Look closely at the URL. A phony or look-alike URL may be a warning sign of false news. Many false news sites mimic authentic news sources by making small changes to the URL. You can go to the site to compare the URL to established sources.

Investigate the source. Ensure that the story is written by a source that you trust with a reputation for accuracy. If the story comes from an unfamiliar organization, check their "**About"** section to learn more.

Watch for unusual formatting. Many false news sites have misspellings or awkward layouts. Read carefully if you see these signs.

Consider the photos. False news stories often contain manipulated images or videos. Sometimes the photo may be authentic, but taken out of context. You can search for the photo or image to verify where it came from.

Inspect the dates. False news stories may contain timelines that make no sense, or event dates that have been altered.

Check the evidence. Check the author's sources to confirm that they are accurate. Lack of evidence or reliance on unnamed experts may indicate a false news story.

Look at other reports. If no other news source is reporting the same story, it may indicate that the story is false. If the story is reported by multiple sources you trust, it's more likely to be true.

Is the story a joke? Sometimes false news stories can be hard to distinguish from humor or satire. Check whether the source is known for parody, and whether the story's details and tone suggest it may be just for fun.

Some stories are intentionally false. Think critically about the stories you read, and only share news that you know to be credible. [5] You can actually learn more about what Facebook is doing to reduce the spread of false news by going online and reading, "Working to Stop Misinformation and False News." [6] Evidence is one part of the advocate's process for proving his or her arguments in support of their stand on a claim.

Reporting a Fake News Story In Facebook

If you see a story in News Feed that you believe is false, you can report it to Facebook.

Click ∨ next to the post you'd like to mark as false

Click Report post

Click It's a false news story

Click Mark this post as false news

News stories that are reported as false by people on Facebook may be reviewed by independent, third-party, fact-checkers. A story may be marked as disputed if these fact-checkers find the story to be false.

Because of the importance of evidence as the supportive underpinning to arguments, it is important that the use of evidence be ethically based. Advocates must be careful in gathering, recording, and using evidence in an effort to sway the hearts and minds of others. This is especially important because the free marketplace of commerce and ideas rests on the foundation of trying to persuade others fairly and honestly.

Persuasion is central to our political campaigns, social compliance, leadership, interpersonal relations, and consumer protections. The fabrication, misrepresentation, and distortion of evidence cannot be tolerated. Advocates, if not already held legally responsible, are certainly ethically responsible for the evidence they use in trying to gain audience adherence for their stand on a claim.

As Patterson and Zarefsky write in CONTEMPORARY DEBATE:

> "All evidence originates from observations of perceived reality. Direct observation means experiencing a situation for ourselves, using one or more of our senses to gather the information. It is often unnecessary and, in fact, sometimes impossible to observe all the events and behavior we use as evidence for arguments. In some cases, we report what others said they observed as eyewitnesses. More often, however, we report generalizations others have drawn, because we do not have the time or the expertise to do the sampling ourselves."[7](Patterson, 1983)

Finding quality evidence that you can use to support your claim is a crucial step in developing a successful argument. Discovering the weakness in the evidence that others use in their arguments is a great first step in clashing with their positions.

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6.6: The Focus of this Chapter

The foundation of any argument is evidence. The higher the quality of evidence the stronger the argument. Poor quality evidence is open to counter arguments that weaken the strength of your argument. In this chapter, we looked at:

- The challenge of sifting through the enormous amount of evidence that is available to us.
- We looked at the five types of evidence and their strengths and weaknesses.
- It is important to analyze the source of the evidence. To do this we can use the “5 W’s” or the C.R.A.A.P test
- If the source of the evidence is the Internet, checking on the domain names becomes important.
- Because of the growth of “Fake News” sites, determining what is “real news” and what is “fake news” has become more and more of a challenge.

CHAPTER OVERVIEW

7: Reasoning

7.1: The Logic of Our Arguments

You are a crime scene investigator. You are at a scene of the death of a middle-aged woman. She is lying dead at the base of an 8-story building. She appears to have jumped to her death. Or did she? You have to determine if she committed suicide or was murdered. You look for clues.

There seems to be no one else around. No one was seen with her when she went to the roof of the building. She had some financial problems that could cause her to feel pressure. Her boyfriend had just broken up with her. All these pieces of evidence seem to suggest that she committed suicide.

On the other hand, she left no suicide note. It was reported by her friends that she didn't complain about her life situation and she was generally in a good mood. And even though her boyfriend had broken up with her, she was planning on going on a "singles cruise." All of this evidence suggests that she was murdered.

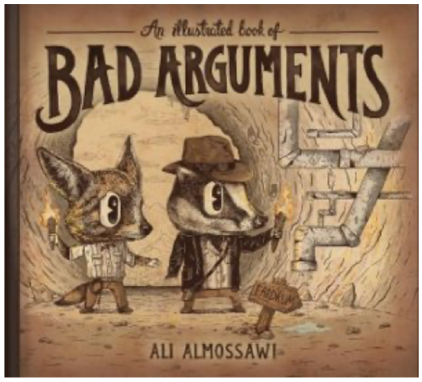
Both conclusions are reasonable given the evidence. But which one is more valid or more reasonable?

7.2: Overview of Reasoning

Reasoning is the process of creating or generating conclusions from evidence or premises. This is the logic of an argument. That is, consistency between data and conclusion Given all of the evidence at the crime scene described at the beginning of the chapter, what can we conclude? Reasoning constructs a logical or rational connection between the evidence and the contention. The more reasonable the argument, the more valid is the conclusion.

Checking the validity of your own arguments will allow you to improve the quality of the arguments you use. When you create logically unsound arguments, you are much less likely to convince people to agree with you. If you are trying to convince an employer that you are indeed the person for a promotion, you want to make sure your arguments are as valid as possible. Not only do you give him or her a reason to accept your argument, but also you can better defend your position if it is challenged.

When you understand how arguments are supposed to be constructed and also how they shouldn't be constructed, you will find all sorts of bad arguments vying for your attention. I am guessing that you are not surprised at how many people are swayed by bad arguments.



7.2.1: "An Illustrated Book of Bad Arguments" (CC BY-NC 2.0; Ali Almossawi via bookofbadarguments.com)

Ali Almossawi has written an entertaining book that introduces logic, *Bad Arguments*. Here, in the final words in the preface of the book, he explains the limits to logic.

> *"In closing, the rules of logic are not laws of the natural world, nor do they constitute all of human reasoning. As Marvin Minsky asserts, ordinary commonsense reasoning is difficult to explain in terms of logical principles, as are analogies. He adds, "Logic no more explains how we think than grammar explains how we speak." Logic does not generate new truths, but rather allows one to evaluate existing chains of thought for consistency and coherence. It is precisely for that reason that it proves an effective tool for the analysis and communication of ideas and arguments".*
>
> -- A.A., San Francisco, October 2013 [1]

7.2.2: "Spock" (Public Domain; NBC Television via Wikimedia Commons)

As Spock from Star Trek would realize, "*Logic is the beginning of wisdom, not the end.*

Testing an argument to see if it is reasonable or logical is a great first step in deciding if you should accept or reject the claim of the argument. If the argument is not reasonable, then you can feel comfortable rejecting the claim. If the argument appears reasonable, then you can go to the next step and check for the accuracy of the statements contained within the argument. Don't be fooled by an argument just because it is repeated over and over. Instead, examine the validity and accuracy of that argument.

The critical thinker must remember that there is a difference between the reasoning needed to establish the validity of the argument and the level of evidence needed to substantiate the accuracy of an argument. Evaluating arguments involves analyzing both the validity of the type of reasoning used and the accuracy of the evidence presented.

When an argument includes both quality evidence and a valid reasoning foundation, the argument is considered to be sound. Professor James Sawyer writes,

> *"Argumentation gives priority to logical appeals while recognizing the importance of ethical and emotional appeals; persuasion gives priority to ethical and emotional appeals while recognizing the importance of logical appeals."*

This chapter will focus on three elements of reasoning; **inductive reasoning**, how we create generalizations; **deductive reasoning,** how we apply those generalizations; and **fallacies,** errors in reasoning.

> *"Science is simply common sense at its best, that is, rigidly accurate in observation and merciless to fallacy in logic." – Thomas Huxley*

Reference

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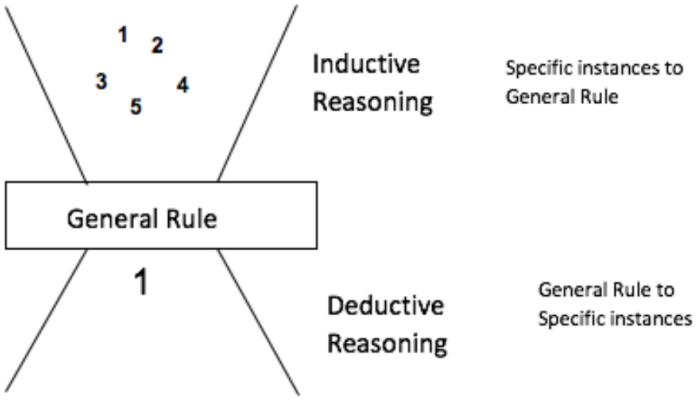
7.3: Types of Reasoning



7.3.1: "Reasoning Diagram" (CC BY 4.0; J. Marteney)

Inductive Reasoning

Inductive reasoning is the process of reasoning from specifics to a general conclusion related to those specifics. You have a series of facts and/or observations. From all of this data you make a conclusion or as the graphic above calls it, a "General Rule." Inductive reasoning allows humans to create generalizations about people, events, and things in their environment. There are **five** methods of inductive reasoning: **example, cause, sign, comparison**, and **authority**.

Example Reasoning

Example reasoning involves using specific instances as a basis for making a valid conclusion. In this approach, specific instances 1, 2, and 3 lead to a generalized conclusion about the whole situation. For example: I have a Sony television, a Sony stereo, a Sony car radio, a Sony video system, and they all work well. It is clear that Sony produces superior electronic products. Or, I have taken four good professors at this college, Mr. Smith, Mrs. Ortiz, Dr. Willard, and Ms. Richard; therefore, I can conclude that the professors at this college are good.

Tests for Reasoning by Example

1. **There must be a sufficient number of examples** to justify the generalized conclusion. How many examples are enough? The answer depends on the significance of the specific instances and the threshold of your target audience.

   Some audiences may find one enough, while others may need many more. For instance, the Neilson Ratings that are used to measure the television viewing preferences of 300 million Americans are determined by roughly 3,000 homes scattered throughout the United States. Yet, the television industry, which uses them to set advertising rates, accepts the 3,000 examples as enough to validate the conclusions.

2. **The examples must be typical of the whole.** They must be representative of the topic about which the conclusion is reached, not fringe examples. For example, you come to college and take one English class whose instructor you find disappointing. You conclude that all 300 instructors at this particular college are poor teachers from this one class from this one Department. The sample might not be representative of the whole population of instructors.
3. **Important counter examples must be accounted for.** If the counter examples mitigate against the examples used, the generalization is threatened. What if a good friend of yours also took another English class and was pleased by the experience. He found that his instructor was an excellent teacher. His example becomes a counter one to the specific instance you used to draw your conclusion, which is now very much in doubt.
4. **The examples must be relevant to the time period of your argument**. If you are dealing with something recent, you need recent examples. If you are trying to prove something in the 1850's, examples from that period are appropriate. If you took the English class 30 years ago, it would be difficult to draw a valid conclusion about the nature of teachers at the college today without using recent examples. Likewise, recent examples may not be reflective of the way the college was 30 years ago.

Causal Reasoning

Causal Reasoning is based on the idea that for every action there is a reaction. Stated very simply, a cause is anything that is directly responsible for producing something else, usually termed the effect. There are two forms of causal reasoning:

The goal of causal reasoning is to figure out how or why something happened. For instance, you did well on a test because you studied two days in advance. I could then predict that if you study two days in advance of the next test, you will do well. In causal reasoning, the critical thinker is trying to establish a predictive function between two directly related variables. If we can figure out how and why things occur, we can then try to predict what will happen in the future.

- Cause to effect, a known cause or causes is capable of producing some unknown effect or effects
- Effect to cause, some known effect(s) has/have been produced by some unknown cause or causes.

Tests of Causal Reasoning

1. **The cause must be capable of producing the effect described, and vice versa.** Has causality really been established or is it just coincidence? Is the cause really capable of producing the effect and vice versa? There must be a direct connection between the cause and the effect that can be demonstrated using empirical evidence. For example, many people mistake superstition for causal reasoning. Is the source of good luck the rubbing of a rabbit's foot? Is the cause of bad luck really the fact that you walked under a ladder or broke the mirror? Did wearing that shirt really cause your team to win five games in a row? The critical thinker must make a clear distinction between a valid causal occurrence and sheer coincidence.
2. **Cumulative causal reasoning increases the soundness of the conclusion**. The more times the causal pattern has happened, the greater the strength given to the causal reasoning, leading to a more valid conclusion. If this is the first time this association has ever been asserted the advocate will have to use more evidence to support the soundness of the causal reasoning advanced.
3. **Counter causal factors must also be accounted for.** The advocate must be aware of the other inherent causal factors that could disrupt the relationship between the cause and effect presented. A claim was made by a father that his son committed suicide, because he was influenced to do so by the songs of a particular rock musician. If we assume that such a causal association exists, we also need to know if there are any other factors that could disrupt the connection: Was the son using drugs; had he tried to commit suicide before; were there family problems; did he listen to other artists and other types of music; did he have peer problems; did he have relationship problems; was he having problems in school, etc.? Each one of these, individually, might be enough to destroy the direct causal relationship that is attempting to be established.

In Massachusetts, Michelle Carter is on trial for manslaughter. As a teenager, she texted her boyfriend, Roy, and encouraged him to commit suicide. And he did. Her defense attorney is arguing that Roy had mental problems, was already suicidal, and that the texts did not cause him to take his life. The prosecution is arguing that the text did cause Roy to kill himself. This is going to be a difficult case to resolve. As stated by Daniel Medwed, a Northeastern University law professor, "*Causation is going to be a vital part of this case, can the prosecution prove that she caused him to kill himself in this way? Would he have done it anyway*?" [1]

Sign Reasoning

Sign reasoning involves inferring a connection between two related situations. The theory is that the presence or absence of one indicates the presence or absence of the other. In other words, the presence of an attribute is a signal that something else, the substance, exists. One doesn't cause the other to exist, but instead is a sign that it exists. Football on television is a sign that Fall has arrived. Football on television does not *cause* Fall to arrive; they just arrive at the same time. A flag is flying at half-staff. is a sign that that there has been a tragedy or a significant person has died. The flag flying at half-staff did not cause the death. It is a sign that the situation occurred.

Sign Reasoning in Poker

Quite a few players' posture betrays the nature of their cards. An unconscious change in their sitting position, such as leaning forward, likely indicates a strong hand. With a weak hand they often show less body tension, for example, having hanging shoulders.

If someone has concealed his mouth with his hand, he often holds a weak hand - he wants to hide his emotions. In a sense, he does not want his expression to betray his hand. The same is true for a player who is reluctant to glance at you: he is worried that his eyes might indicate he is afraid.

Particularly for beginners, a quick glance at his cards is a reliable tell. The tell here is an unconscious one, brief look at the player's own cards. If, for example, the flop brings 3 hearts and the player looks at his cards, it is unlikely he has the flush.

This is because with an off-suit hand, a beginner usually takes no notice of the suits at first glance. Only with a suited hand will they remember the suit. Thus, you can often assume here that they have at most one heart.[2]

Tests of Sign Reasoning

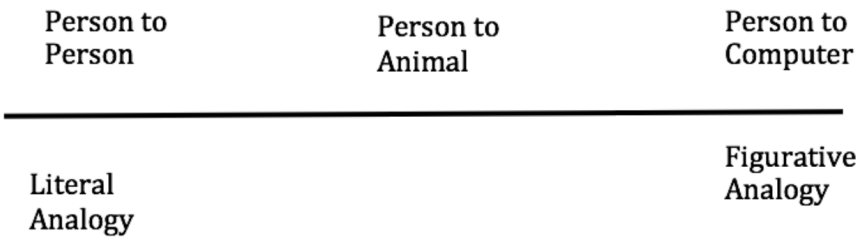
1. **Other substance/attribute relationships must be considered.** Is there another substance that might have the same attributes? Could the sending of roses to your wife be a sign of something other than love? Can the same signs indicate the presence of a valid second or third substance?
2. **Cumulative sign reasoning produces a more probable connection.** The more often this substance/attribute relationship occurs, the more likely it is to repeat itself. If this is the first time you have noticed the association, you will need a good deal of evidence to demonstrate that it really is a valid sign argument.

Comparison Reasoning

Comparison reasoning is also known as reasoning by analogy. This type of reasoning involves drawing comparisons between two similar things, and concluding that, because of the similarities involved, what is correct about one is also correct of the other. There was once an ad for alligator meat that presented this comparison; "When you try alligator meat just remember what is considered exotic food today may often become normal fare in the future. This was the case with lobster. About 75 years ago, lobster was thought of as poor man's food; many New Englanders would not even think of eating it. Today, of course, lobster is a delicacy savored by many people." This type of reasoning wants us to conclude that alligator meat is to humans today, as lobster meat was to humans 75 years ago. And since lobster is now a delicacy so will alligator meat. There are two types of comparisons: **figurative and literal.**

- **Literal comparisons** attempt to establish a link between similar classifications; cars to cars, states to states, people to people. For instance, you can compare a Ford compact car with a Toyota compact car; the lottery in one state with the lottery in another state; how your parents treat you with how your best friend is treated by her parents. In these comparisons, similar classifications are being used for the purposes of making the analogy. Literal comparisons can provide logical proof for the point being made and thus can increase the validity of the argument.
- **Figurative comparisons** attempt to link similarities between two cases from different classifications. Jim Baker of the Bush 2000 campaign, argued after the 5-4 Supreme Court decision awarding the state of Florida to Bush, *"Saying George W. Bush stole the Presidency from Al Gore is like saying someone tried to steer the Titanic after it had already hit the iceberg."* Figurative comparisons carry no weight in terms of providing logical proof for an argument. They can, however, be very effective for the purpose of illustration and persuading an audience.

The line between a Literal and Figurative analogy is not clear. Instead of a comparison being totally figurative or totally literal, the comparison can be viewed in degrees using the following continuum.



7.3.2: "Analogy Diagram" (CC BY 4.0; J. Marteney)

There are few literal comparisons that can be made between a person and a computer. A person to an animal may have some overlapping actual similarities. While comparing one person to another person suggests a Literal Analogy. The more towards the figurative side the comparison is, the less the argument is logically valid. The more towards the literal side the comparison is, the more logically valid the argument is.

Tests for comparison reasoning

1. **To be considered as proof, the analogy must be a literal one.** The further advocates move away from figurative comparisons and toward the literal comparison end of the continuum, the more validity they secure for their argument. Figurative comparisons carry no logical argumentative influence at all.
2. **The cases need to contain significant points of similarity.** The greater the number of important or major similar points between the cases, the easier it is to establish the comparison as a sound one. However, no matter how many points of similarity can be established between the two cases, major points of differences can destroy the analogy.
3. **Cumulative comparison reasoning will produce a more probable conclusion.** The greater the number of cases a person can use for the purpose of comparison, the more valid the comparison. If a student has been to more than one college or has had many instructors, he or she can evaluate the quality of the teachers by comparing them. The validity of his or her conclusion is increased as the number of teachers compared increases.

Children often try to convince a parent to let them do or try something the parent is opposed to by comparing themselves to another child. They point out they are the same age as the other child, they are in the same grade in school, the child lives in the same neighborhood as they do, thus they should be allowed to do what the other child is allowed to do. This seems to be a very effective argument by comparison until the parent says, you are not that child or we are not their parents. To the parents, these points of difference destroy the comparison the child is trying to make.

Poor Figurative Analogy May 23, 2016

(CNN) Veterans Affairs Secretary Bob McDonald downplayed Monday the time it takes for veterans to receive medical treatment by comparing the "experience" of waiting for health care to Disneyland guests waiting for a ride.

"When you go to Disney, do they measure the number of hours you wait in line? Or what's important?" McDonald told reporters at a Christian Science Monitor

breakfast in Washington. "What's important is what's your satisfaction with the experience?"

American Legion National Commander Dale Barnett excoriated McDonald: "The American Legion agrees that the VA secretary's analogy between Disneyland and VA wait times was an unfortunate comparison because people don't die while waiting to go on Space Mountain." [3]

7.3.3: "Robert McDonald" (Public Domain; US Department of Veterans Affairs via Wikimedia Commons)

Reasoning from Authority

Reasoning from Authority is used when a person argues that a particular claim is justified, because, it is held or advocated by a credible source. That credible source can be a person or organization. Basically, the authority possesses some credentials that qualify the source as an authority. Thus, you accept the argument because someone you feel is an authority tells you so. You can use this type of argument in two ways. First, you can ask that an argument be accepted simply because someone you consider an authority advocates it. People grant authority status to other people they think have more knowledge than they do: students to teachers, patients to doctors, and clients to lawyers. Children often argue this way when they justify a position by saying “because my mommy or daddy said so.”

Second, you can support your arguments with the credibility of another person. Here you are attempting to transfer the positive ethos from the credible source to the position you are advocating. Advertisers do this when they get popular athletes and entertainers to promote their products. The advertisers are hoping that your positive view of these people will transfer to their product, thus producing higher sales for the products. You may be persuaded to see a particular movie, attend a certain play, or eat at a restaurant because, it was advocated by a well-known critic.

Tests for reasoning from authority

1. **The authority must be credible**. That is, the authority must possess the necessary qualifications for the target audience in order for the source to be used as justification for a point of view. If challenged, the advocate must be prepared to defend the expertise and ethos of his or her authority.
2. **Views of counter authorities must be taken into account.** The advocate must be aware of the other "experts" or highly credible sources who take an opposite position from the one being advocated. If he or she fails to do this, the argument breaks down into a battle over whose expert or authority should be accepted as being the most accurate.
3. **Cumulative views of authorities increase the validity of the reasoning**. Citing more than one expert or authority will increase the likelihood that your position will be viewed as the most valid one being argued.

Important conclusion: Since the process of reasoning by induction usually involves arriving at a conclusion based on a limited sampling, the conclusion to an inductive argument can never be totally certain. Why? Because no matter which type of inductive reasoning is used, nor how carefully critical thinkers adhere to the tests of each reasoning pattern, critical thinkers can never sample the totality of the population used to infer the generalization about that population.

Thus, **conclusions drawn from inductive reasoning are always only probable.** To use induction effectively, an advocate must demonstrate that the specifics are compelling, and thus justify the conclusion, but never claim that the conclusion is guaranteed in all situations.

Deductive Reasoning

Deductive reasoning is the process of reasoning from general statements, or rules, to a certain, specific, and logical conclusion. Deductive arguments begin with a general statement that has already been arrived at inductively. Unlike inductive reasoning, where the conclusion may be very valid, but is always only probable, the conclusion reached by deductive reasoning is logically certain.

A deductive argument offers two or more premises that lead to a conclusion directly related to those premises. As long as the two premises are sound, there can be no doubt that the final statement is correct. The final statement is a matter of logical certainty.

Deductive arguments are not spoken of as "true" or "false," but as "sound" or "unsound." A sound argument is one in which the premises guarantee the conclusion, and an unsound argument is one in which the premises do not guarantee the conclusion.

An advocate who uses deduction to frame an argument must be certain that the general statement is accepted as correct and then must demonstrate the relationship between this general statement and the specific claim, thus proving beyond a doubt the conclusion.

A deductive argument has three parts: a major premise, a minor premise, and a conclusion. This form is called a syllogism.

The major premise is a general statement. For example: **All telemarketers are obnoxious**. The subject section of the major premise (All telemarketers) is known as the antecedent; the predicate section of the major premise (are obnoxious) is known as the consequent.

The minor premise is a statement of a specific instance related to the major premise:

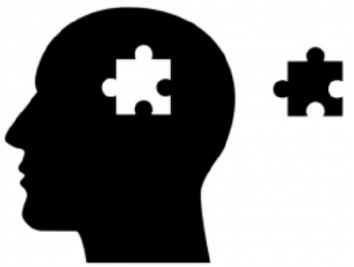
The person on the phone is a telemarketer.

The conclusion is the statement derived from the minor premises relationship to the major premise: **The person on the phone is obnoxious.**

An effective deductive argument is one in which your audience accepts the general statement and is then logically compelled by the development of the argument to accept your conclusion.

Thus, we use inductive reasoning to create generalizations or major premises, and we can use deductive reasoning to apply those generalizations to specific situations.

The final step in checking the strength of reasoning is to make sure there are no fallacies. Often, correcting for fallacies is the missing piece to creating and evaluating logical arguments



7.3.4: "Silhouette Brain Logic" (CC0 1.0; mohamed_hassan via Needpix.com)

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7.4: Fallacies

A **fallacy** is an error in reasoning. A fallacy indicates there is a problem with the logic of deductive or inductive reasoning. This differs from a factual error, which is simply being wrong about the facts. To be more specific, a fallacy is an “argument” in which the premises given for the conclusion do not provide the needed degree of support.

A fallacy is a mistake in the way that the final conclusion of the argument, or any intermediate conclusions, are logically related to their supporting premises. When there is a fallacy in an argument, the argument is said to be unsound or invalid

The presence of a logical fallacy in an argument does not necessarily imply anything about the argument’s premises or its conclusion. Both may actually be correct, but the argument is still invalid because the conclusion does not follow from the premises using the inference principles of the argument.

Recognizing fallacies is often difficult, and indeed fallacious arguments often persuade their intended audience. Detecting and avoiding fallacious reasoning will at least prevent adoption of some erroneous conclusions.

Types of Fallacies

Fallacies are usually recognized in isolation, but woven into the context of an argument they may pass unnoticed, unless the critical thinker is on guard against them. Some advocates openly use fallacies in order to exploit an unknowing audience, but many times we use fallacies unintentionally. Many fallacies exist. Here is a few of the most common ones used in everyday argumentation.

False Dilemma The False Dilemma fallacy occurs when an argument offers a false range of choices and requires that you pick one of them. Usually, the False Dilemma fallacy takes this form: Either A or B is true. If A is not true, then B is true. “Either you love me or hate me.” The range is false because there may be other, unstated choices which would only serve to undermine the original argument. If you agree to pick one of those choices, you accept the premise that those choices are indeed the only ones possible. Seeing something as "black and white” is an example of a false dilemma.

Appeal to Emotion This fallacy is committed when someone manipulates peoples’ emotions in order to get them to accept a claim. More formally, this sort of “reasoning” involves the substitution of various means of producing strong emotions in place of evidence for a claim. Here the attempt is to transfer a positive emotion you have on one thing to the object or belief that is being argued.

This sort of “reasoning” is very common in politics and it serves as the basis for a large portion of modern advertising. Most political speeches are aimed at generating feelings in people, so that these feelings will get them to vote or act a certain way. How many times will you see pictures of American flags in a political commercial? The flag and other traditional images are aimed at getting the audience emotionally involved. In the case of advertising, the commercials are aimed at evoking emotions that will influence people to buy certain products. Beer commercials frequently include people at parties to get the potential consumers excited about the product. In many cases, such speeches and commercials are notoriously free of real evidence.

Non-sequitur The phrase “non-sequitur” is Latin for “it does not follow.” If an inference is made that does not logically follow from the premises of the preceding argument, then the inference is a non-sequitur. For example, “I am wearing my lucky hat today, nothing can go wrong.” Though the term “non-sequitur” can be used broadly as an informal fallacy to describe any unwarranted conclusion, it is most often used when a statement openly contradicts itself and just makes no sense.

Slippery Slope This fallacy reduces an argument to absurdity by extending it beyond its reasonable limits. This is an abuse of causal reasoning by trying to link events that normally have very little to do with each other. For example: legalizing marijuana will lead to the legalization of cocaine. If you legalize cocaine, you’ll be able to buy crack and every other drug at your local 7-11. In this argument, it is asserted that the legalization of marijuana will eventually lead to purchasing crack at local 7-11’s. Once one accepts the legalization of marijuana, then one is assumed to be on the slippery slope towards the legalization and availability of every other drug. In a Slippery Slope argument, you suggest that a series of events will occur leading to an undesirable conclusion instead of just one step as in Causal Reasoning.

Ad Hominem Translated from Latin to English, “Ad Hominem” means “against the man” or “against the person.” An ad hominem fallacy consists of saying that someone’s argument is wrong purely because of something about the person rather than about the argument itself. You will hear people on the radio and television dismiss comments by people they label as a conservative or a liberal, just because of how they label that person. Merely insulting another person or questioning the credibility of someone does not necessarily constitute an ad hominem fallacy. For this fallacy to exist it must be clear that the purpose of the characterization is to discredit the person offering the argument, in an attempt to invite others to then discount his or her arguments.

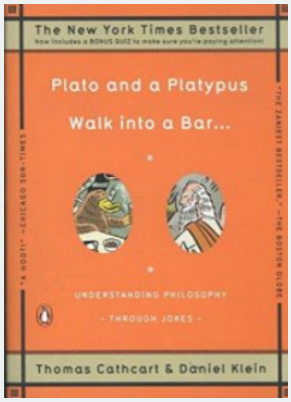
The Ad Hominem fallacy was employed by those who wanted to silence 16-year-old Climate Change activist Greta Thunberg. Those who disagreed with her argued that she should be ignored as she is just a child.

Hasty Generalization This fallacy occurs when an arguer bases a conclusion on too few examples, that are not necessarily typical of the conclusion being made. For instance, “My two boyfriends have never shown any concern for my feelings. Therefore, all men are insensitive, selfish, and emotionally uncaring.” Or, “I read about this man who got worms from eating sushi. I always knew that sushi was not good to eat." Without more examples, these arguments can be considered fallacies.

Circular Reasoning The fallacy of circular reasoning is the assertion or repeated assertion of a conclusion, without giving reasons in its support. In other words, supporting a premise with a premise, instead of a conclusion. It may imply that the conclusion is self-evident or rephrase the conclusion to sound like a reason. Circular reasoning creates an illusion of support by simply asserting its conclusion as though it were a reason, or by reasserting the same claim in different words. For example, “Kerosene is combustible; therefore, it burns.” Or, “George Clooney is the best actor we have ever had, because he is the greatest actor of all time.”

Appeal to Ignorance In this fallacy, the arguer claims that something is valid only because it hasn’t been proven false. This fallacy errs by trying to make this argument in a context in which the burden of proof falls on the arguer to show that his or her position is actually accurate, not just that it has not yet been shown false. The argument mistakes lack of evidence for evidence to the contrary. In effect, the argument says, “No one knows it is accurate. Therefore, it is false.” For example, “There is no proof that hand gun legislation will reduce crime. Therefore, outlawing handguns would be a futile gesture." Or, "We have no evidence that God doesn’t exist, therefore, God must exist." Ignorance about something says nothing about its existence or non-existence.

Plato and a Platypus Walk into a Bar



7.4.1: "Cover of Plato and a Platypus Walk Into a Bar" (Fair Use; Paul Buckley & Penguin Group via Wikimedia Commons)

In their book authors Thomas Cathcart and Daniel Klein illustrate logical principles and fallacies using classic jokes. For example, to illustrate the fallacy of post hoc ergo propter hoc, they use the following:

> “In general, we’re deceived by post hoc ergo propter hoc because we fail to notice that there’s another cause at work.
>
> A New York boy is being led through the swamps of Louisiana by his cousin. ‘Is it true that an alligator won’t attack you if you carry a flashlight?’ asks the city boy.
>
> His cousin replies, ‘Depends on how fast you carry the flashlight.’
>
> The city boy saw the flashlight as a propter when it was only a prop.” [1]

Bandwagon The name “bandwagon fallacy” comes from the phrase “jump on the bandwagon” or “climb on the bandwagon” a bandwagon being a wagon big enough to hold a band of musicians. In past political campaigns, candidates would ride a bandwagon through town, and people would show support for the candidate by climbing aboard the wagon. The phrase has come to refer to joining a cause because of its popularity. For example, trying to convince you that you should do something because everyone else is doing it, is a bandwagon fallacy. "Everybody is buying a Tesla car, so should you."

Post hoc ergo propter hoc The post hoc ergo propter hoc, “after this, therefore because of this,” fallacy is based upon the mistaken notion that simply because one thing happens after another, the first event was a cause of the second event. Post hoc reasoning is the basis for many superstitions and erroneous beliefs.

For example, California earthquakes always happen after unusual weather patterns. Or, Allison always scores a goal when she wears her red and white soccer shoes. Or, I wore my Packers shirt and my Packers team won. I now wear my Packers shirt for every game. These are all, post hoc ergo propter hoc fallacies

Appeal to Pity With this fallacy, the arguer tries to get people to agree with his or her conclusion by evoking pity and sympathy either with the situation or with the situation of some third party. By appealing to people's ability to sympathize with others, a powerful emotive force can be created. Unfortunately, however serious another person's problems are, that does not automatically make their claims any more logical. My sympathy for that situation does not create a reasonable basis for believing his or her claims. For example, "I really need this job since my grandmother is sick" or "I should receive an 'A' in this class. After all, if I don't get an 'A' I won't get the scholarship that I need." These appeals evoke emotions, but are not necessarily logical.

Straw-Man Fallacy The arguer attacks an argument that is different from, and usually weaker than, the opposition's best argument. To distort or misrepresent an argument one is trying to refute is called the straw man fallacy. In a straw man fallacy, the opponents argument is distorted, misquoted, exaggerated, misrepresented or simply made up. This makes the argument easier to defeat, and can also be used to make opponents look like ignorant extremists. The refutation may appear to be a good one to someone unfamiliar with the original argument.

Logical fallacies are errors of reasoning, errors which may be recognized and corrected by critical thinkers. Fallacies may be created unintentionally, or they may be created intentionally in order to deceive other people. The vast majority of the commonly identified fallacies involve arguments, although some involve explanations, or definitions, or other products of reasoning. Sometimes the term fallacy is used even more broadly to indicate any false belief or cause of a false belief. A fallacy is an argument that sometimes fools human reasoning, but is not logically valid.

In his book, PERSUASION: THEORY AND PRACTICE, Kenneth Anderson writes,

> *"Logical appeals are powerful forces in persuasion. However, logic alone is rarely sufficient to yield persuasion. Desires and needs of receivers affect and determine what they will accept as logical demonstration. Thus, it is possible for one person to report that he or she is convinced by the logic used while another person remains horrified at the lack of logic presented."* [2]

You can have high quality evidence, but lead to incorrect conclusions because your argument has poor reasoning. You always want to create the "soundest" or most logical argument possible. And you also want to examine the logic of others presentations to determine what fallacies might be evident.

Reference

1. Cathcart, Thomas, and Daniel Klein. *Plato and a Platypus Walk into a Bar.* New York: Penguin Books, 2007.
2. Anderson, Kenneth. *Persuasion: Theory and Practice*. Boston: American Press, 1983.

7.5: The Focus of this Chapter

Reasoning is what links your evidence to your contentions. Reasoning is the process of creating or generating conclusions from evidence or premises. This is the “logical” part of your argument. In this chapter, we looked at logic and found that:

- There are two general categories of reasoning, Deductive and Inductive.
- Deductive reasoning argues from the general rule to a specific conclusion and follows the rules of syllogisms.
- Inductive reasoning moves from specifics to create a general rule.
- We examined five types of Inductive reasoning. Each type has tests that we can make to insure the reasoning is sound.
- Unsound reasoning is known as fallacies. Recognizing fallacies in an argument allows us to reject an appeal that is illogical.

CHAPTER OVERVIEW

8: Validity Or Truth

8.1: The Critical Thinker's Approach

Ever get tired or frustrated by listening to "experts" who disagree on the same subject. Take for example drinking wine and how it affects our health.

> *Drinking just a small glass of wine a day can more than double the risk of cancer, a study claims. …Dominique Maraninchi, INCA's president, said: 'Small daily doses of alcohol are the most harmful. There is no amount, however small, which is good for you.'*
>
> *---Jenny Hope, Daily Mail* [1]
>
> *Thanks to its alcohol content and non-alcoholic phytochemicals (natural occurring plant compounds), wine has been shown to reduce the risk of heart disease, certain cancers and slow the progression of neurological degenerative disorders like Alzheimer's and Parkinson's Disease.*
>
> *--Joy Bauer, TODAY contributor* [2]

This is just one example where "*experts*" lack of agreement can be confusing. This is nothing new. To examine the roots of how we evaluate arguments, we need to make our first stop, Ancient Greece. For the first time, instead of a **God King**, a group of citizens debated to govern themselves. They needed to better understand how to effectively argue and distinguish between and effective an ineffective argument.

Reference

1. Jenny Hope, "Drinking just one glass of wine a day can INCREASE risk of cancer by 168%, say the French!" 2009, https://www.dailymail.co.uk/news/art...ay-French.html (accessed November 6, 2019)
2. Joy Bauer, "Is Wine Good for You?", 2008, https://www.today.com/health/wine-good-you-2D80555144, (accessed November 6, 2019)

8.2: Plato and Aristotle

8.2.1: "Plato and Aristotle" by Raphael is in the Public Domain, CC0

For a quick look back at the key origins of a clear argumentation process we need to travel back to ancient Greece and the influences of Plato and Aristotle. Plato felt that a discussion was the most productive way to solve a conflict. He called these discussions, a dialogue which worked best when conducted by the "*all-knowing, great minds*" of Greece, which he called the Philosopher Kings. Plato appreciated discussions as an unlimited number of positions could be examined and reflected on through the process of question and answer. Plato called this process the **Dialectic Approach.**

Plato's discussions were very focused.

> *"Plato's dialectic is a purposeful conversation, a dialogue that addresses ideas and arguments, encourages contradiction and counter-arguments, and stresses analysis and synthesis as the primary means for discovering knowledge. The capacity of the dialectic for self-examination and self-instruction sets it apart from other kinds of discourse."*[1]

According to Plato, the dialectic is the art of being able to pose questions and provide answers. They start with a hypothesis, or as we would call it a claim, and through the discussion add knowledge to test if the soundness of the hypothesis.

The Dialectic Approach involved developing an opening thesis or position and an antithesis or opposite position. These positions were fully developed and discussed. The goal of this dialogue was to arrive at synthesis, which Plato said could be considered the **absolute Truth.** Synthesis could be thesis, antithesis, or a new position developed during the dialogue process. To Plato, synthesis equaled the Truth and no further discussion was needed.

Aristotle's approach to argumentation focused more on persuading others. His philosophy of argument is embodied in his **Rhetorical Approach**. Aristotle's book, THE RHETORIC, is generally considered the most important single work in the literature of the Speech discipline. Book I of The Rhetoric opens with this definition: "*Rhetoric is the counterpart of Dialectic*."[2] The Rhetorical Approach may be described as a process for discovering all of the available means of "artistic" persuasion on any subject. This is opposed to "inartistic" forms of persuasion like torture or even being threatened with an "F" for not doing your homework.

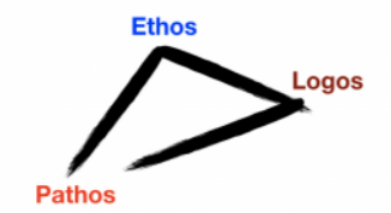
Reference

1. Kimball, Jack. Plato's Communicative Utility in Japan. 1995. 12 June 2017. http://www.fauxpress.com/kimball/res/plato.html (Accessed November 15, 2019)
2. Aristotle and C.D.C.Reeve, Aristotle's The Rhetoric, (Indianapolis: Hackett Publishing Company Inc. 2018)

8.3: The Rhetorical Process

Aristotle believed that through the use of the rhetorical process

- Truth and justice may be guarded against falsehood and wrong.
- Debate may be conducted on subjects in the absence of absolute truth.
- Both sides of a claim may be presented.
- Proof to establish the probability of a position may be developed.



8.3.1: "Logos, Ethos and Pathos" by J. Marteney is licensed under CC BY 4.0

These four aspects of the rhetorical process described by Aristotle are still in use today. Aristotle's persuasion involves the use of three elements of proof: **logos, pathos, and ethos**.

Logos Means logic and is the use of reason to support a decision. Logical appeals essentially present the situation, the alternatives, and the set of probabilities involved in the decision-making process. Such appeals are directed to our mind's reasoning capabilities.

Pathos Means emotion and is the use of emotional and motivational appeals to support a decision. Emotional appeals are directed to the wishes, wants, desires, goals, and needs of the person, whose acceptance is desired. Such appeals are directed to the heart.

Ethos Refers to the use of source credibility to support a conclusion. Aristotle perceived ethos as a powerful proof supplied by the source himself, and through which judgments could be made about his character, wisdom, and goodwill. The argument is accepted due to the character of the person arguing. Aristotle wrote,

> *"Persuasion is achieved by the speaker's personal character where the speech is so spoken as to make us think him credible. We believe good men more fully and more readily than others; this is true generally whatever the question is, and absolutely true where exact certainty is impossible and opinions are divided. This kind of persuasion, like the others, should be achieved by what the speaker says, not by what people think of his character before he begins to speak."* [1]

Ethos is thus the image of the source held in the mind(s) of the audience. Source credibility can be developed in two ways:

The first type is called **initial ethos**. This ethos is based on the arguer's credentials, status, and reputation, as known to the audience before they hear or read the content of the message. Advertisers have increasingly turned to “positive image makers” to sell their clients' products. The idea is if you like them, you will be favorably disposed toward the product they are endorsing.

The second type is called **derived ethos**. This is the speaker’s credibility that is created during the message. You may not know much about the presenter, but as you listen to the argument you find yourself more and more impressed with him or her. Derived ethos is created from both the content of the presentation and the style of the speaker. In a job interview, you want to create a positive derived ethos as you make your “argument” that you should be hired.

A minimal level of positive ethos is necessary for logical and emotional proofs to achieve effectiveness. Low credibility sources cannot use high levels of emotional appeals effectively, because the audience doesn’t believe in the source in the first place. Likewise, lacking a certain minimal ethos, logical proof will be ignored, because the source is not perceived as a person who is trustworthy.

Reference

1. Aristotle and C.D.C.Reeve, Aristotle's The Rhetoric, (Indianapolis: Hackett Publishing Company Inc. 2018)

8.4: Defining An Argument

An argument is a communication process that attempts to resolve an actual disagreement, confusion, or ignorance about something. Arguments occur all the time and are a staple ingredient of many communication environments. The end goal of an argument should be to reach a conclusion which is sufficiently persuasive to convince someone of a position on a claim.

Some arguments are relatively trivial and easy to resolve. For example, if I argue that I am older than you and if you disagree, then we may argue about the fact. Here, all we may have to do is look at our drivers licenses to resolve the disagreement. Similarly, if I argue that the final exam for a class is on Monday and you argue that I am wrong, because it is on Wednesday, then we can resolve that argument by referring to a mutually acceptable authority on the subject, like the published final exam schedule.

Usually arguments such as these are relatively trivial. Their resolution is easy and quick because there is an authority to establish the facts, and there is general acceptance of that authority as the arbitrator of the dispute. Once that authority rules on the dispute, then the argument is over.

Arguments become more complex when we are not immediately certain about how to resolve them. These arguments usually involve some type of value judgment, where the final outcome is not necessarily factually based. For example, one sports team is better than another, one type of food is tastier than another, should I purchase one type of car or another. For that reason, we have a variety of structured arguments such as; judicial arguments, legislative debates, industrial disputes, divorce mediation, and so on, that have agreed upon processes and rules. When using these structured arguments, we agree to abide by the processes we have set up to resolve the argument, even if the result is not always what we had hoped.

One challenge is that even with the best intentions, miscommunication is likely to happen. Remember, **perfect communication is impossible**. The more significant differences between communicators, the greater the potential miscommunication. Miscommunication may lead to conflict, or aggravate conflict that already exists. This is one of the reasons we strive for constructive arguments.

To engage in effective arguments, we need to have an understanding of how to argue constructively. There is a major difference between constructive argumentation and merely bickering or quarreling with another person or organization. In the public world of work, politics, education, and the media, the primary requirement of an effective argument is that it must be rational, that is, follow the rules of reason.

In today's world, there is an abundance of irrationality. Just take a quick look at Facebook posts and responses to others. We need to be much more skilled in the argumentative process to be able to argue constructively and achieve a conclusion.

The Goals of Argumentative Communication

Jim's wife Suzy is suspicious. She has noticed on the credit card bills charges from a jewelry store and a department store that Jim has told her nothing about. She also notices that he is getting secretive phone calls and that is not like him. And he goes out, telling her he is going to the gym, but he is gone too long for just a workout. Suzy is wondering what is going on, is he is having an affair? She, of course, asks her hairdresser about it and they both share their thoughts.

A couple of days later Jim is getting his hair cut by the same person who cuts Suzy's hair and is asked what he is doing. Jim tells her that he is preparing for a surprise visit from their daughter. He is buying presents for Suzy at his daughter's request. The phone calls were from her, his long workout also included making arrangements for the trip.

Was Suzy's conclusion that Jim is having an affair a reasonable one? That is, is the conclusion consistent with the evidence used to make it? In this case, the answer is yes. All of the evidence can be considered traditional support for someone having an affair. Is Jim's explanation that he is buying his wife presents on behalf of his daughter a reasonable one? That is, is the explanation consistent with the evidence used to make it? In this case, the answer is also yes.

But, who is telling the Truth, Jim or Suzy? To answer this, we need to ask what is **Truth**? And a second important question, "Do we even use the concept of Truth in improving our skill at argumentation? To answer this we turn to Epistemology, the theory of knowledge or branch of philosophy that studies Truth and how knowledge is gained, how much we can know, and what justification there is for what is known.

8.5: Truth

8.5.1: "Truth Sign" by Nick Youngson is licensed under CC BY-SA 3.0

So, what does Epistemology tell us about the concept of Truth? In Epistemological terms, Truth is absolute, the same for everyone, never relative. Truth is the complete accuracy of propositions, statements, sentences, assertions and beliefs.

Truth is a word best avoided entirely in argumentation, except when placed in quotes or with careful qualification. Its colloquial use has so many shades of meaning from, 'it seems to be correct,' to the absolute Truths claimed by religion.

Truth becomes confused with opinion, that is, a statement is True only because the person believes it is True. The idea of allowing such a view is that it rules out the views of anyone else. Truth becomes intensely personal.

To look for the Truth in any argumentative situation is to look for the one and only correct answer. The process of argument usually ends up in frustration, when conflicting Truths are at the center of the argument. This is because the parties involved in the argument both believe that their position is the one and only Truth and that any other position advocated must be a false or untrue one. Thus, the only way an argument over conflicting truths can be resolved is for one of the argumentative parties to give up their untruth and accept the other party's Truth. In this context, all argument must be viewed as a win/lose proposition. The arguer who feels he or she knows the Truth can never be open to new ideas and is therefore dogmatic. They will never intellectually grow.

Consider that once accepted so-called "Truths" have changed: at one time the earth was believed to be flat, at one time it was believed that the Earth was the center of the universe, at one time everyone thought that asbestos was safe and did not cause cancer, and at one time heroin was thought to be a non-addictive alternative for the painkiller morphine. The list of these changed "Truths" is endless and ongoing. Why? Because **personal certainty does not equate to Truth**. Personal certainty is based on information that might be inaccurate or incomplete.

When we say that an argument is **valid** we are referring to its internal consistency. Validity is the strength of our conclusions, inferences or propositions based on the logic of the argument. Critical thinkers need to think in terms of arguing over the validity of opposing viewpoints, as opposed, to arguing over which of the opposing viewpoints is the truthful one.

Only when you make a commitment to validity can you free yourself to accept more than one position as being logical and reasonable. **Effective argument can only take place when people are willing to accept the possibility that their current position on the subject may be wrong.** If a person believes that his or her position is the one and only Truth, no constructive argumentation can take place. At best, some destructive form of communication takes place like, bickering, quarreling or fighting. At worst, violence erupts.

The critical thinker needs to realize that while his or her position is valid, other valid positions may also exist. This understanding allows critical thinkers to engage in the process of argumentation with others, in order to test the validity or reasonableness of their respective arguments. Critical thinkers need to remember that there is no necessary or inherent connection between **Truth** and **validity**.

As Professor of Argumentation James Sawyer writes,

> *"All of us reach decisions and take actions that are based upon strong probability: strong information or evidence to establish the likelihood that something happened, is happening, or will happen. So many variables exist that to be certain of anything is a very rare situation."*

For example, in trying to explain weather changes, experts looking at the data came up with several valid, reasonable, conclusions: the early effects of global warming, warm Pacific Ocean currents known as El Nino, cold Pacific Ocean currents known as La Nina, increased effects from the weakening of the ozone layer, or just normal weather variability. All of these conclusions are

supportable with factual data. They are all valid, and any one of them may be the "True" explanation, or none of them may be the "*True*" reason.

8.6: Validity

Validity refers to the internal logic or reasonableness of an argument. Given the data that is used in the argument, is the conclusion that is reached a logical or consistent conclusion? If not there is a fallacy, or misuse of logic, in the argument. An important idea to remember is that even if the argument is totally valid, if the data being used is inaccurate, the conclusion will still be inaccurate. This begins to set up the difference between the concepts of Truth and validity.

8.7: Truth vs. Validity

So, now let's go back to the Jim and Suzy story. Both of their conclusions are valid, that is, internally consistent with the evidence they used to come up with their conclusions. We would use the process of argumentation to try and determine which conclusion was the most valid. But which position is True? The best answer, from a critical thinker's perspective would be, "we don't know." Why, because, the argumentative process is not capable of determining the ultimate Truth. Critical thinking is focused on validity.

Measuring Validity

Validity is not an all or nothing score. In Chapter Three we looked at Dr. Littleton's Model of the Bead of Truth, where he measured validity along a wire between 0 and 1. Now it is time to look more closely at that measurement scale and define some of the points between the two extremes.

The Continuum of Argumentative Certainty is a measurement of how sure you are on a claim that is being made from totally uncertain to ninety-nine percent convinced. As we have seen, a good critical thinker is never 100% convinced of anything, that way they stay open minded.

The more you move from the left to right, the more likely you are to accept the claim as being correct. The critical thinker starts on the left side. As he or she hears more and more convincing information, they are likely to be moved up towards the right-hand side of the scale. Moving from a low percent certainty to a higher percent certainty, we become more likely to accept the claim being made. We may treat these different levels on this scale in a somewhat vague manner, but science attempts to be much more precise.

8.8: Differences Between Truth and Validity

Differences Between Truth and Validity

TRUTH	VALIDITY
Truth is the complete accuracy of whatever was, is, or will be, error-proof, beyond doubt, dispute or debate, a final test of right or wrong of people's ideas and beliefs.	Validity is defined as the internal consistency of an argument. That is, is the conclusion reached consistent and reasonable with the information used to reach that conclusion?
On any subject, there can be one and only one Truth. For example, there either is or is not a God. Since these two are mutually exclusive and opposite, only one of these two positions can be True.	On any subject, there can be many valid positions. For example, both positions that there is a God, and there is not a God, can be real and argued as valid or reasonable.
The threshold for Truth is measured as absolute certainty.	The threshold for validity is measured using the entire Continuum of Certainty.
Truth is tied to self-esteem. Thus, resolving arguments related to truth require a win or lose environment. If a single truth exists, there are two communicative problems: (1) we don't know who knows it; and (2) we don't know if it can be accurately communicated to others.	Validity is tied to the information available. The goal in arguing validity is to find out which position in an argument is the most valid one at the time resolution is reached. The most valid position might change as new information becomes available.
Arguing over the Truth promotes dogmatism. Dogmatism discourages constructive argumentation.	Arguing for the most valid position promotes open-mindedness. Open-mindedness encourages constructive argumentation.
Acquiring Truth is not the goal of a course in argumentation and critical thinking.	How to recognize valid positions and finding out which position is the most valid one is the goal of a course in argumentation and critical thinking.

8.9: Critical Thinking Defined

I have been talking all around critical thinking, it seems that we should finally define critical thinking. As you might guess, there is no, one simple definition of critical thinking. Below are several definitions that will give us a variety of ways of looking at critical thinking.

Authors Goodwin Watson and Edwin Glaser in their 1937 book, Manual of Directions for Discrimination of Arguments Test, define critical thinking as,

> *"...a persistent effort to examine any belief or form of knowledge in the light of evidence that supports it and the further conclusions to which it tends, as well as the ability to recognize problems, to weigh evidence, to comprehend and use language with accuracy and discrimination, to interpret data, to recognize the existence or nonexistence of logical relationships between propositions, to draw warranted conclusions and generalizations and to test the conclusions by applying them to new situations to which they seem pertinent."* [1]

In the book, Critical Thinking, B. K. Beyer explains that,

Author W. G. Sumner back in 1940 emphasized that importance of critical thinking and that if we are educated in it, we "*cannot be stampeded*."

> *[Critical thinking is] … the examination and test of propositions of any kind which are offered for acceptance, in order to find out whether they correspond to reality or not. The critical faculty is a product of education and training. It is a mental habit and power. It is a prime condition of human welfare that men and women should be trained in it. It is our only guarantee against delusion, deception, superstition, and misapprehension of ourselves and our earthly circumstances.*
>
> *Education is good just so far as it produces well-developed critical faculty . . . A teacher of any subject, who insists on accuracy and a rational control of all processes and methods, and who holds everything open to unlimited verification and revision, is cultivating that method as a habit in the pupils. Men educated in it cannot be stampeded . . . They are slow to believe. They can hold things as possible or probable in all degrees, without certainty and without pain. They can wait for evidence and weigh evidence . . . They can resist appeals to their dearest prejudices. Education in the critical faculty is the only education of which it can be truly said that it makes good citizens. Sumner.*[3]

The Foundation for Critical Thinking founded by the late Richard Paul, offers the following definition for critical thinking:

> *"Critical thinking is that mod of thinking--about any subject, content, or problem -- in which the thinker improves the quality of his or her thinking by skillfully analyzing, assessing, and reconstructing it. Critical thinking is self-directed, self-disciplined, self-monitored, and self-corrective thinking. It presupposes assent to rigorous standards of excellence and mindful command of their use. It entails effective communication and problem-solving abilities, as well as a commitment to overcome our native egocentrism and socioicentrism."* [4]

Richard Paul argued that critical thinking involves the willingness to question and challenge our deepest beliefs and prejudices. He felt that critical thinking is a call to think for oneself without prejudice so we may attain a perspective from which to reflect upon human affairs in a more objective way in order to come to an understanding of how we should act.

Authors Moore and Parker in their book Critical Thinking write,

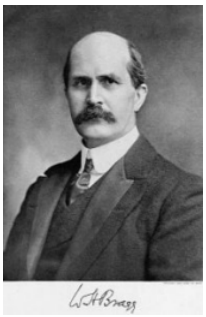
> *"Critical thinking is the careful, deliberate determination of whether we should accept, reject or suspend judgment about a claim and of the degree of confidence with which we accept or reject it. The ability to think critically is vitally important, in fact, our lives depend on it."* [5]

The wording of the California State University requirement for a course in critical thinking, defines critical thinking as,

Why teach critical thinking? Most of the experts in the critical thinking discipline see students as too often being just passive receptors of information. Through technology, the amount of information available today is massive. This information explosion is likely to continue in the future. Students need a guide to sort through information and not just passively accept it.[6]

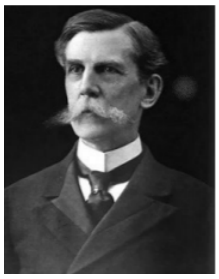
Critical thinking involves questioning. It is important to teach students how to ask good questions, to think critically, in order to continue the advancement of the very fields we are teaching. Richard Paul says, *"Every field stays alive only to the extent that fresh questions are generated and taken seriously."* [8]

Researcher, B. K. Beyer sees the teaching of critical thinking as important to the very state of our nation. He argues that to live successfully in a democracy, people must be able to think critically in order to make sound decisions about personal and civic affairs. If students learn to think critically, then they can use good thinking as the guide by which they live their lives.[9]



8.9.1: "William Bragg" by Unkown is in the Public Domain, CC0

One way of realizing the goals of critical thinking is by learning the skills of argumentation and by applying those skills to everyday decision-making and conflict situations in our life. The key to being in charge of our life is the ability to make effective decisions. To be effective critical decision makers, we need to be able to analyze and evaluate the information we receive in order to determine the best course of action to take.



8.9.2: "Oliver Wendell Holmes" by Unkown is in the Public Domain, CC0

> *"The main part of intellectual education is not the acquisition of facts, but learning how to make facts live."* --Oliver Wendell Holmes[11]

As Patterson and Zarefsky conclude,

> *"The view of argumentation as a critical device depends on certain assumptions. The premises that actions should be reasonable, that decisions should be justified through critical inquiry and persuasive explanation of ideas, and that a clash of ideas helps arrive at the probable truth are fundamental to such a view. Argumentation allows people to resolve differences, permits opposing views to be considered before decisions are made, and enhances the quality of social decisions."* [12]*(Patterson, 1983)*

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8.10: Critical Thinking Skills

We are not born with natural critical thinking abilities. **Critical thinking is a skill that can be developed.** The good news is that we all have the ability to improve our critical thinking skills. We can become more effective decision makers and improve our self-confidence. Below are some of those Critical Thinking Skills that can be developed and enhanced:

Critical thinkers are intellectually curious. This skill implies that the critical thinker is never totally satisfied with what they know. He or she seeks answers to various kinds of questions and problems. The critical thinker is concerned with investigating the causes and seeking explanations of events; asking why, how, who, what, when, and where.

Critical thinkers are open-minded. An open-minded person is one who is confident enough in his/her abilities to accept new and contradictory ideas, which challenge his/her current beliefs. This is opposed to being "tolerant" where the dogmatic person may politely listen to other arguments, but their minds will not be changed.

The open-minded person is one who is not only willing to listen to new ideas, but will alter an already adopted position if the new data dictates. The open-minded person is willing to consider a wide variety of positions and beliefs as possibly being valid. Open-minded people are flexible. They are willing to change their beliefs and methods of inquiry, if they are faced with a more valid argument. Open-minded people show a willingness to admit they may be wrong and that other ideas they did not accept may be correct. Critical thinkers do not just want to prove they are correct; they are open- minded enough to change their mind.

Critical thinkers avoid "Red Herrings." Critical thinkers follow a line of reasoning consistently to a particular conclusion. They avoid irrelevancies, called "red herrings," that stray from the issue being argued. When Jim and his wife Suzy argue, and Jim feels he is losing, he looks at Suzy and says, "You argue pretty well for a short person." He is hoping to draw her off the argument and send her fishing for the "red herring," her being short. If she takes the bait the original argument fades away. Critical thinkers won't go after "red herrings."

Critical thinkers are aware of their own biases. All humans are biased, some more than others. Some know that they have biases, some are not aware of their biases. We all have biases that we are not aware of and the critical thinker strives to learn them, so he or she can be more in charge of their thinking. It may be too much of a challenge to eliminate the different biases we have. Instead a critical thinker needs to be aware of the bias and how it will affect the thinking process. Thinking about thinking is referred to as metacognition. A critical thinker looks at how he or she thinks and makes decisions in order to improve the process.

> *"The test of a first-rate intelligence is the ability to hold two opposed ideas in mind at the same time and still retain the ability to function."*
>
> **----F. Scott Fitzgerald[1]**

Critical thinkers learn to handle confusion. People will do almost anything to avoid the mental pain that comes with lingering confusion. We bypass it, avoid it, and even try to pass it off to someone else. In this haste to avoid confusion we often make quick decisions based on limited data or overworked stereotypes. The critical thinker allows him or herself to be confused as they work through the argument towards a conclusion.

Critical thinkers are able to control and use their emotions. Notice this does not say, "*Eliminate emotions*." We gather all sorts of valuable data through our emotions, that we can use in the decision-making process. We just have to be careful not to let

emotions dominate our critical thinking and argumentation. Nothing will destroy the critical thinking process faster than misplaced or misdirected anger, fear, or frustration.

Critical thinkers are sensitive and empathetic to the needs of others. Critical thinkers need to pay particular attention to the needs of their target audience. The needs, concerns, and desires of your audience may be different than yours. The critical thinker is more effective if he or she can understand those concerns. They may not agree with them, but at least they understand them. The target audience may be the person trying to convince you of their argument or the person you are trying to convince with your argument. Persuasion usually takes place when an advocate is able to meet the needs of his or her target audience. In fact, your needs may be unimportant as it pertains to moving a target audience towards adherence to your point of view.

Critical thinkers can distinguish between a conclusion that might be "true" and one that they would like to be "true." Notice the use of "truth" with a lower case "t." This "truth" refers to just what a person believes, not the ultimate correct position that would be indicated by "Truth." A conclusion that might be true, is based on calculating the probability of its outcome, to see if it has a reasonable chance of becoming a reality. The second type, a conclusion that you would like to be true, is based more on your wishing, wanting, and desiring that it become a reality. The first can be put to the tests of critical reasoning, but the second cannot, and, therefore, is of little value in critical thinking. You may believe your child to be a great person, but the evidence might suggest otherwise.

Critical thinkers know when to admit to not knowing something. An essential prerequisite to understanding is humility; to be able to admit when you don't know an answer to a situation. Although we want to protect our egos by believing we know everything, learning comes from questioning, not from knowing all the answers. When we can admit that we don't know, we are more likely to ask questions that will enable us to learn. By giving ourselves permission to admit we don't know everything, we can overcome the fear that our lack of knowledge will be discovered. The energy expended trying to cover up what we don't know diminishes our ability to learn. If we are always trying to disguise our lack of knowledge of a subject, we will never fully understand what it is we don't know about it. Feel free to say, "I don't know."

Critical Thinkers are independent Thinkers. They have the confidence to state their opinions and point of view to others who might disagree. They use the skills of critical thinking to support their positions and make their arguments.

Critical thinkers seek a "dialogical" approach to the process of argument. "Dialogical" thinkers seriously seek points of view other than their own. The ability to think "dialogically" would include the abilities to: analyze, synthesize, compare and contrast, explain, evaluate, justify, recognize valid and invalid conclusions, identify or anticipate or pose problems, look for alternatives, apply logical principles, and solve conventional or novel problems. These are many of the skills of critically thinkers.

Stephen Brookfield in his book, Challenging Adults to Explore Alternative Ways of Thinking, writes,

> *"Critical thinking is only possible when people probe their habitual ways of thinking, for their underlying assumptions, those taken-for-granted values, common-sense ideas, and stereotypical notions about human nature that underlie our actions."* [2]

We are looking at the process of argumentation and the type of person who can be most effective in an argumentative situation. You as a critical thinker will be both involved in an argument and an observer of an argument. We can improve our abilities to do both.

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8.11: The Focus of This Chapter

In this chapter I wanted to focus on the history and goal of critical thinking. Key thoughts from this chapter included:

- A Historical foundation to critical thinking and arguing. Critical thinking is not a new concept. We have been exploring how we think and how we can improve our thinking for over 2,500 years.
- The goal of an argument is validity instead of Truth. We all want to know the “Truth.” But arguing from the position of Truth tends to lead to dogmatism and hinders individual growth and actual conflict resolution.
- There are many definitions and skills of a critical thinker. Being a critical thinker is not to just criticize others, but instead to be open-minded enough to evaluate arguments.
- Critical thinking is not a natural, inherent skill. We are not born critical thinkers. Critical thinking is a skill that we all can develop and improve.

CHAPTER OVERVIEW

9: Changing Beliefs, Attitudes and Behavior

9.1: Challenging Stasis

A California state educational survey revealed that 75 percent of high school students in California admit that they cheat on tests, and 66% of students say cheating to obtain a desired grade is okay. Years ago, students would have considered cheating a very big deal, but now it appears to be wrong only if they are caught. This change in attitude about cheating has led to a change in "cheating" behavior.

To explain this change of behavior we need to examine some of the current beliefs of the typical student. The campus newspaper at Moorpark Memorial High School conducted a survey to discover why student cheating is so rampant. The results of the poll revealed that the main reasons for cheating are to get good grades and the lack of test preparedness. The pressure to get good grades occurs for several reasons, including parental pressure, lower car insurance rates, and college acceptance. These pressures are cited in an attempt to justify the cheating behavior. When we take a test, we make the decision to cheat or not to cheat. If we feel pressured to do well, or if it is important that we do well, and if we are unprepared due to lack of studying, we might tend to have a positive attitude toward cheating. Therefore, the decision is made to cheat.

In analyzing this increase in student cheating, we start with three very important terms: beliefs, attitudes and behavior. Briefly explained, one's beliefs (knowledge) and values (goods or bads) lead to the development of an attitude (likes or dislikes), which in turn guides or directs one's behavior. And when all these parts become comfortable, we are in our personal stasis or comfort zone.

To best understand the overall process, we need to first look at beliefs, and at subsets of beliefs, known as values, followed by a description how this leads to an attitude. Once we understand this foundation for how we act, we can look at various persuasion strategies that are used to alter beliefs and attitudes. We can learn not only how to use these approaches to change others, but we can examine how others use these methods to persuade us.

9.2: Beliefs

Beliefs represent all the bits of information we collect about people, events, and things in our life. They are cognitions that we have discriminated and selected from all those we have been exposed to, relevant to any subject in our environment.

Beliefs are measured using a true-false continuum and a probability scale. There are some beliefs you feel are absolutely true or false; probably true or false; or are not sure about. All of us possess beliefs about a college education. They may include that a college education takes time, is a lot of work, makes our parents happy, and will allow us to make more money in the future, and so on.

Some beliefs are stronger than others or as we say, have more salience. That is, some information about the environment is more important to us than other information, such as, how you are doing in a class as opposed to how another class member is doing.

9.3: Values

A special subset or type of beliefs is known as values. Values are:

- **Enduring**, or long lasting concepts of the nature of good as opposed to brief ideas. Resistant to change.
- **Salient**, important beliefs, inflexible beliefs about the worth given to people, events, things and philosophy in one's life.

Values are enduring. Values stand the test of time, because they are tied to our basic human needs and because they are learned very early in life. Many of the values you possess are likely to be shared by other members of your family and community and have been passed down from one generation to another. They are the common bond that unites cultures and social systems and are seen as necessary for the continuation and survival of the culture and social system. Values are also enduring because no acceptable alternatives have been found for those values. What acceptable alternatives are there to values like freedom, or equality, or honesty, or being forgiving, or having self- respect, or being loved?

Values are salient and lack flexibility. Values are generally regarded as absolutes. Values have a tendency to take on the appearance of being certain, with little room for flexibility. Since values categorize things as good or bad, right or wrong, superior or inferior, there are rarely shades of gray. In this country, freedom of speech is valued. This, as with most values, seems to be an all-or-nothing situation, for it is difficult to establish partial freedom of speech, as the courts have attempted to do with the question of pornography. Once adopted, people will fight for, even die for, their values. This is especially valid for nationalistic and religious values.

The Beliefs of a Snake Handling Preacher

A Kentucky pastor who starred in a reality show about snake-handling in church has died -- of a snakebite. Jamie Coots died Saturday evening after refusing to be treated, Middlesboro police said.

On "Snake Salvation," the ardent Pentecostal believer said that he believed that a passage in the Bible suggests poisonous snakebites will not harm believers as long as they are anointed by God. The practice is illegal in most states, but still goes on, primarily in the rural South. Coots was a third-generation "serpent handler" and aspired to one day pass the practice and his church, Full Gospel Tabernacle in Jesus Name, on to his adult son, Little Cody.

"Even after losing half of his finger to a snake bite and seeing others die from bites during services," Coots "still believes he must take up serpents and follow the Holiness faith," the website says.

Because of their strength, it becomes very difficult to change values. Instead, if you are attempting to convince someone to accept a proposal, you need to demonstrate how that proposal fits in with his or her values. An astute political candidate who is running for office will try to convince you that he or she stands for your values, instead of attempting to convince you to accept his or her values which may be different. We often make the mistake of attempting to convince someone that our proposal fits in with what his or her values "should" or "should not be."

As Myers and Myers write in their book, Dynamics of Human Communication,

> *"Values indicate to those who share them what is desirable or undesirable, good or bad, moral or immoral, and therefore what one should stand for. They provide people with a guidance system which is supposed to enable them to choose the 'right' alternative when several courses of action are possible."* [1]*Myers, 1992)*

Two Categories of Values

Psychologist Milton Rokeach has done extensive work with values. In his works, he describes the two basic types of values that people possess: **Terminal** values and **Instrumental** values.[2]

Terminal values are the major goals in one's life. They represent lifelong desired end states. **Instrumental** values are short-term ways of living our day-to-day life. They are the "goods and bads" we follow each day.Page Break

INSTRUMENTAL VALUES	**TERMINAL VALUES**
AMBITIOUS (hard-working, aspiring)	**A COMFORTABLE LIFE** (a prosperous life)
BROAD-MINDED (open-minded)	**AN EXCITING LIFE** (a stimulating, active life)
CAPABLE (competent, effective)	**ACCOMPLISHMENT** (lasting contribution)
CHEERFUL (lighthearted, joyful)	**A WORLD AT PEACE** (free of war and conflict)
CLEAN (neat, tidy)	**A WORLD OF BEAUTY** (beauty of nature and the arts)
COURAGEOUS (standing up for your own beliefs)	**EQUALITY** (brotherhood, equal opportunity for all)
FORGIVING (willing to pardon others)	**FAMILY SECURITY** (taking care of loved ones)
HELPFUL (working for the welfare of others)	**FREEDOM** (independence, free choice)
HONEST (sincere, truthful)	**SELF-RESPECT** (self-esteem)
IMAGINATIVE (daring, creative)	**HAPPINESS** (contentedness)
INDEPENDENT (self-reliant, self-sufficient)	**INNER HARMONY** (freedom from inner conflict)
INTELLECTUAL (intelligent, reflective)	**MATURE LOVE** (sexual and spiritual intimacy)
LOGICAL (consistent, rational)	**SECURITY** (protection from attack)
LOVING (affectionate, tender, sexual)	**LEISURE** (an enjoyable, leisurely life)
OBEDIENT (loyal, dutiful, respectful)	**SOCIAL RECOGNITION** (respect, admiration)
POLITE (courteous, well-mannered)	**TRUE FRIENDSHIP** (close companionship)
RESPONSIBLE (dependable, reliable)	**WISDOM** (a mature understanding of life)
SELF-CONTROLLED (restrained, self-disciplined)	**SALVATION** (saved, eternal life)

Remember, values differ from general beliefs in two important ways: **Values are enduring** and thus very resistant to change, and **values are inflexible**.(Rokeach, 1989)

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9.4: Value Systems

Value systems are an organized collection of individual values, such as honesty, kindness, and equality. These values are prioritized with the most important values on top, and the least important on the bottom. Values are usually embodied in a set of moral and/or religious systems found in all cultures and societies. We may feel that all of our values are important, but when two or more values clash, we have to decide which value is most important to us. This becomes a value system, which guides our decision-making.

To give you an idea how a value system works, I present to you the Gene Autry's Cowboy Code. Gene Autry was a famous Hollywood "singing cowboy' of the 30's, 40's and 50's. He was also the owner of the Angels professional baseball team, when he passed away. He was a hero to many, many children who wanted to be a cowboy just like him. Over the years Gene Autry had developed a philosophy of life that he decided to share with these young admirers. This system of values, like any value system, would guide the actions of his young cowboy fans.

9.4.1: "Gene Autry" (Public Domain; Seattle Packing Company-Bar-S Brand via Wikimedia Commons)

Gene Autry's Cowboy Code

- The Cowboy must never shoot first, hit a smaller man, or take unfair advantage.
- He must never go back on his word, or a trust confided in him.
- He must always tell the truth.
- He must be gentle with children, the elderly, and animals.
- He must not advocate or possess racially or religiously intolerant ideas.
- He must help people in distress.
- He must be a good worker.
- He must keep himself clean in thought, speech, action, and personal habits.
- He must respect women, parents, and his nation's laws.
- The Cowboy is a patriot.[1]

You can find other cowboy codes from Roy Rogers to the Lone Ranger at a website called "Cowboy Codes of the West." [2] You can also find online "life codes" from "Chivalry" to the Japanese warriors "Bushido Code." All these codes list values that guide decision-making.

9.4.2: "Core Values" (CC BY-SA 3.0; Nick Youngson via Picserver.org)

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9.5: How Are Values Learned?

The process of learning values and organizing them into a defined value system takes place through a learning process. The book, Values Clarification: A Handbook of Practical Strategies for Teachers and Students, describes four methods of learning our values.[1]

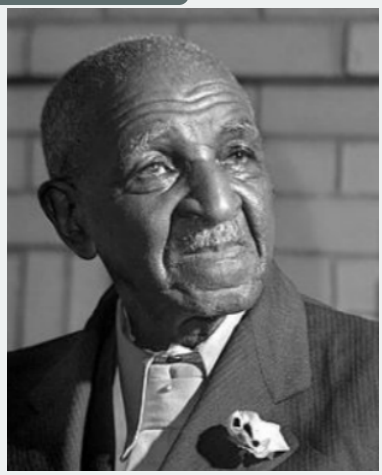
Moralizing is the method by which values are transmitted in a direct manner from a parent or parent-like figure to the child or childlike figure. It is the quickest, and simplest method, where one person just tells the other which value(s) to uphold. Often this method is the “don’t do as I do, but do as I say” approach.

Modeling says that by watching the actions of the parental model, the child will learn which values are correct. In this method, the parent-like figure holds him or her up as a model of what is acceptable as good or bad, right or wrong. A young boy may determine how to treat his girlfriend by how his father treats his mother. This is the “don’t do as I say, do as I do” approach.

Experimenting states that each individual must find his or her own appropriate value system, for no two people necessarily have one system. The process of discovering one's values is one of trial and error, experience and experimenting, and sorting through the options available. Life’s experiences will teach one what is good and bad, right or wrong.

Clarification teaches the consequences of accepting or denying a particular value. For example, instead of Moralizing that the value of always telling the truth is important, the Clarification process discovers the positive and negative aspects of always telling the "truth." The person then can make the choice to accept or reject the value. Instead of teaching a person which values to accept or reject, this approach describes a method one can utilize to discover one’s values.

The 8 Rules George Washington Carver Lived By



9.5.1: "George Washington Carver" (Public Domain; Arthur Rothstein via Wikimedia Commons)

- Be clean both inside and out
- Neither look up to the rich nor down to the poor
- Lose, if need be, without squealing
- Win without bragging
- Always be considerate of women, children and older people
- Be too brave to lie
- Be too generous to cheat
- Take your share of the world & let others take theirs

The acceptance or rejection of new beliefs is affected by our value system. Beliefs that are consistent with or correspond to our value system are more readily accepted than those which contradict our value system. If you have accepted the value that getting a good college education is very important you will have stronger adherence to future beliefs which reinforce that position. If a person tells you that they believe college to be a waste of time, you will initially reject that belief merely because it contradicts a value you hold.

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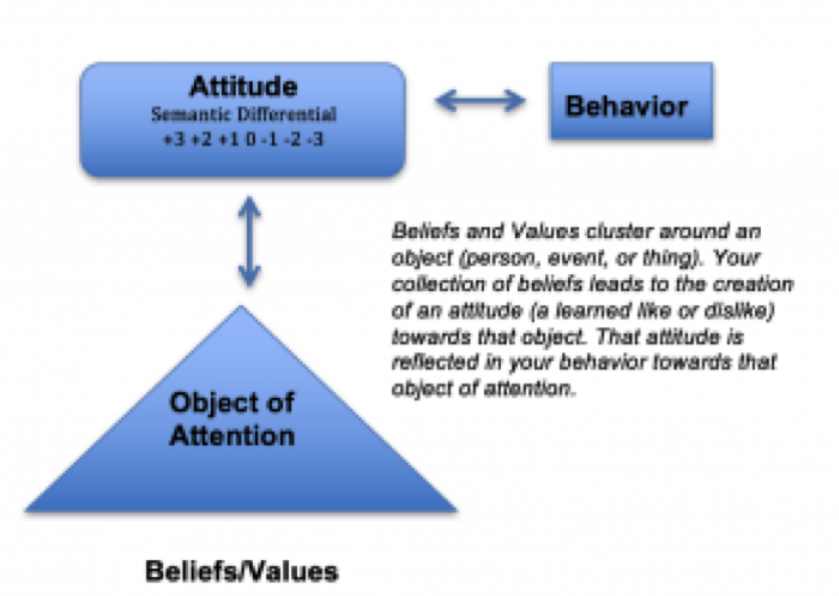
9.6: Attitudes

Attitudes are our likes and dislikes. The clustering of beliefs around a person, place or thing, causes us to like or dislike that person, place or thing. When more positive than negative beliefs are clustered around an object, the resulting attitude is favorable. When there are more negative than positive beliefs, the resulting attitude is unfavorable.

An attitude itself cannot be directly observed; only the behavior that follows from the attitude can be observed. Milton Rokeach defines an attitude as, *"a learned predisposition to respond favorably or unfavorably towards a person, place, or event." (Rokeach, 1989)*

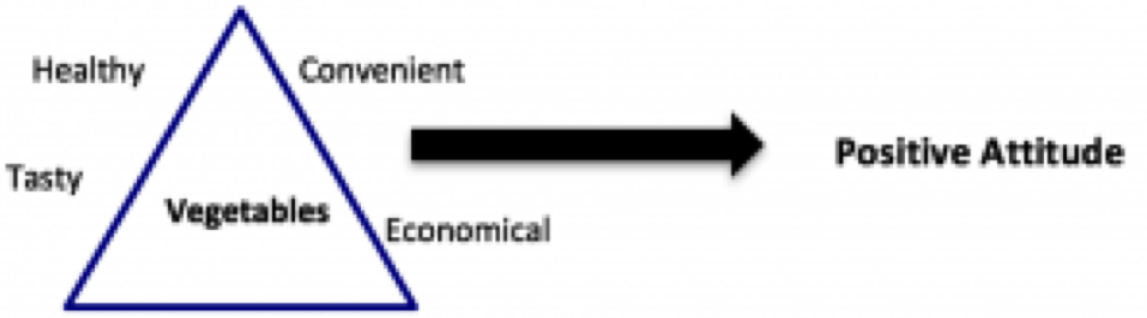
9.6.1: "Roy E. Disney" (CC BY-SA 3.0; Towpilot via Wikimedia Commons)

"When your values are clear to you, making decisions becomes easier." --Roy E. Disney[1]



9.6.2: "Attitude Diagram" (CC BY 3.0; J. Marteney)

Take vegetables. You have several beliefs clustered around the object, vegetables. You believe that vegetables are good for your health, some taste good, some, like carrots, are convenient to eat and vegetables are economical. Based on all these beliefs you have a positive attitude towards vegetables.



9.6.3: "Beliefs to Attitude" (CC BY 3.0; J. Marteney)

Given that you have a positive attitude towards vegetables, your behavior should be to eat them. This balance between your beliefs and attitudes, and your attitude and behavior is a form of Stasis. You are comfortable.

Attitudes guide our behavior. If you have developed a positive attitude about getting a college degree, you are more likely to attend classes regularly and get good grades. If you have developed a negative attitude toward getting a college degree, you are more likely to cut school regularly and get poor grades. If you have a positive attitude towards vegetables, your behavior will probably include eating more vegetables.

Attitudes have a measurable direction. We can place attitudes on a continuum with highly favorable at one end, and highly unfavorable at the other end. Pollsters measure not just if you like a product or not, but how much you like a product.

Attitudes are learned. We have attitudes on just about everything we know. These attitudes are learned. People are not born liberal or conservative, baseball or basketball fans. Do you share the same attitudes of your family?

Attitudes have importance or salience. We simply feel stronger about some of our attitudes than about others. We may feel somewhat that a college education will make us better and more informed citizens, but we have a stronger belief that in obtaining that education we will be much better off financially. Some subjects are closer, more important, or more relevant to us than others. Some subjects are distant, less important, or less relevant to us than others. The more personalized the attitude, the more salience it will possess. Attitudes emerge from the clustering of beliefs and values we learn from others with whom we live and associate. Because they are learned, they can be unlearned and changed, although change most often will be resisted.

One important question emerges. Once we have an attitude, can it be altered? Are there attitudes that can never change? Many of our attitudes begin to form when we are young and continue to develop through adulthood. Once attitudes have had years to form, they are more resistant to change. Attitudes are a fact of life and play a vital role in how we make decisions.

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9.7: Resisting Change

As normal human beings, we want maintain our comfortable beliefs and so we naturally resist change or any challenge to our existing beliefs and attitudes. As a critical thinker, however, we know this leads to dogmatic thinking. So, we are in a constant fight between our natural urge not to change and our skill at critical thinking that tells us to be open to new ideas.

When we attempt to persuade others, we need to present an argument that actually creates a feeling of discomfort in their currently held beliefs. This discomfort leads to a tension. We would like this tension to lead to a change in their minds, but since humans want to be comfortable they strive to resolve the tension they feel without changing their minds. One theory that has looked at this process is the Theory of Cognitive Dissonance.

9.8: Cognitive Dissonance

As a “normal” human being, we want to maintain our stasis and be comfortable. There are times, however, when we become aware of cognitions that disagree with our held beliefs, causing a feeling of uncertainty, or discomfort. How do we return to our feeling of comfort when we experience cognitions that are contradictory to our beliefs and disrupting our stasis?

A cognition has been understood to be both the process of understanding our environment and the end product of that process, a unit of awareness. Our environment bombards us with more stimuli than we can interpret. The few that we become aware of are known as cognitions. Leon Festinger developed his Theory of Cognitive Dissonance[1] in “A Theory of Cognitive Dissonance” to explain how a person attempts to resolve the discomfort felt when they experience contradictory cognitions.[2]

Leon Festinger argues that there are a total of three different, possible relationships between cognitions, which he refers to as being thoughts or ideas. Instead of calling the comfort state, stasis, he refers to it as being a state on “consonance.” Dissonance is an “unpleasant motivating state (a feeling) that encourages attitude change to achieve or restore consonance.” [3]

- Change a cognition
- Add a new cognition
- Change the importance of the cognition

For example, you may like an occasional drink, or two or three. You are comfortable with your drinking. But then you become aware of how alcohol can harm your body from your liver to your heart. Your stasis is now disrupted and you need to resolve this discomfort. According to Festinger, you can do one of three things to return to your comfortable stasis:

Change a cognition This can be accomplished by either altering the new cognition or your old, comfortable cognition. The person could rationalize by saying the source of the disrupting information on alcohol was biased, or unreliable. Or as a last resort, the original cognition that drinking was fine should now be changed.

Add a new cognition This can occur where you read from another source that a glass of red wine a night is actually good for your health

Change the importance of the cognition This can occur when you realize you only drink on weekends so the health effects are really not that big a deal.

Although Dissonance Theory can suggest that a person will engage in one of these three actions, the theory does not predict which one.

If you are attempting to persuade another person, you need to first disrupt their stasis by providing cognitions that create dissonance. A person cannot be persuaded to change to a new stasis until they are made uncomfortable with their current stasis. A couple has been living together for a couple of years and now she wants to get married. He is very comfortable with his stasis of just living together. If she wants to persuade him to get married, she must first make him uncomfortable with their current relationship. Then he will be open to a change in the relationship.

But even when we experience discomfort in our current situation, we will still fight to not change. Researcher Robert Abelson suggests that we resist a challenge to our stasis, by following one of four methods of reducing an inconsistency with our comfortable stasis.

> *“Inconsistency is not always resolved by bringing the maverick beliefs, attitudes, or values into line. At least four other strategies for reducing inconsistency have been distinguished: denial, bolstering, differentiation, and transcendence.”* [4]

- **Deny** one of the dissonant cognitions. Here a person makes the determination the cognition is wrong. “She is the spokesperson for that company, so you can’t believe anything she says.”
- **Bolster** an attitude they want to believe by looking for sources that support beliefs they want to maintain. After becoming aware of a new cognition, a person can now easily find an internet source that agrees with his original belief.
- **Differentiate** one of the cognitions by separating it into different paths, where one of the paths may contain the dissonant idea, but the other path has a more consonant idea. “Sure, she may be telling lies, but she is also trying to save her children’s feelings.”
- **Transcendence** is the opposite of differentiate and occurs when the dissonant parts are put together and lead to an important whole. “Sure, he is lying on the school form and pretending to live in the proper district, but he really wants to get his daughter into a better school."

Convincing ourselves that we should maintain our stasis in the face of new information can also be referred to as rationalization. Based on the work theory of belief-dilemma resolution by Robert Abelson[5] Ware and Linkugel (1973)[6] used the same four key methods to explain how we excuse ourselves and rationalize that we are not to blame for some action we have taken.

Denial: “I didn't do it.” Denial is the simplest of methods of excusing oneself and avoiding punishment. This is a method of coping with cognitive dissonance felt when our actions are in contradiction with our values. It does, however, require plausibility. You cannot deny something where there were multiple witnesses, although some do try.

Bolstering: “I'm a nice person.” I can't have done it. The word 'bolstering' means propping something up. When defending an attack, particularly when it appears to be personal, then many feel the need to bolster their character and reputation.

Differentiation: Distancing oneself. Show that you are not really connected with what went on. Distance yourself from the event. Indicate that it had nothing to do with you and that you had no knowledge of it.

Transcendence: A higher purpose when faced with an accusation, transcendence is a method of connecting the accused action with a greater meaning, thereby excusing the act as legitimate on a more important stage…. Transcendence is a method of reframing, not so much changing the facts, but changing their meaning by looking at things in new ways.[7]

As you can see from these previous theories, **we are not naturally, open minded critical thinkers.** Our natural state is to create a comfortable stasis and do our best to maintain that comfortable position. Instead of taking in new information and testing it to see if there is enough validity to it to change our minds, our natural tendency is to fight this new information, using a variety of strategies so we can maintain our comfort zone. This has led me to observe that **“People would rather be comfortably wrong than uncomfortably right.”**

Persuasive Strategies

There are, as you might guess, a variety of approaches that describes how we can change the stasis of others and be more aware of how others will try to change us. The first step is to analyze your audience.

Reference

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9.9: Audience Analysis

To successfully persuade someone to see your point of view you must first either change or reinforce their beliefs. You either change their beliefs to go along with yours or your show them how their beliefs already are consistent with your point of view. In either case, you need to better understand your audience and what beliefs they currently hold.

Audience analysis is a planning technique you can use to determine the characteristics of your audience and what motivates them. This information is used to decide the best way to present information and persuade the audience to the action you want them to do, or belief you want them to hold. I frequently wanted a new computer, but my wife was not so enthusiastic. But I knew that she would do anything to help our children succeed in school. Using this analysis, I would make the argument that getting a new computer would help our children succeed in school. And just like that, we had a new computer.

Your audience is where it all begins. The more you know about your audience, the better you can "target" your remarks to reflect their specific interests and concerns. When I refer to audience, I don't necessarily mean a large crowd. Your audience might just be one person from a member of your family to your boss. Your audience will respond as you want them to **only** if you can convince them that they will benefit from the action you're proposing. As you prepare your persuasion, make sure you base your plans on an understanding of your audience. Focus on what matters most to them, how they will react, and what will help you lead them to your goal.

Any number of factors can affect how your audience will react. These can include their experience, education, job or professional background, age, gender, ethnic background, cultural differences, and more. Knowing your audience helps you to shape your message in a way that's most likely to gain their acceptance. The following will help a good advocate **target** his or her audience.

- Know the attitudes and biases of your audience.
- Know how the audience already feels about the subject of your persuasion.
- As much as possible, know what motivates your audience.
- Never talk down to your audience.
- Talk to the interests of your audience.
- Make sure your audience understands the importance to them of the goal of your persuasion.
- Make sure you stay consistent.
- Be clear.

You're sitting at home on a hot summer day, thinking about how thirsty you are. A 30-second spot for Coca-Cola plays on the television. You respond to the ad by going to the refrigerator and taking out a can of Coke or you drive to a store and buy a Coke. Either way, a cause/effect relationship exists between your behavior and the advertisement. Corporate Coca-Cola loves you, but does not expect its ad to have that kind of effect on everyone.

The more likely response to the ad is that the next time you are purchasing soda at the store, you will recognize the Coca-Cola label, you remember the taste, and many pleasant memories- both your own and those given you in ads--are recalled. Maybe, whenever you see a Coke logo or anytime you are thirsty, you think about those pleasant memories. Now Coca-Cola is part of your daily life; Coca-Cola product and memories shape your thinking. In fact, Coke is such a part of your life that you do not even have to consciously think about it. When Coca-Cola achieves such a level of acceptance, as it has within our culture, its efforts at persuasion through the mass media have been successful.

The word persuasion itself is very misunderstood. For many, it conjures up images and feelings of making someone do something that he might not want to do. This is very far from how persuasion techniques really work.

The main purpose of persuasion to convince someone to think, act, or feel a certain way. The goal of persuasion is to get someone to do something you want them to do that they are not currently doing and this includes thinking about a subject as you would like them to think about that subject. Persuasion involves modifying the attitudes of a target audience in such a way as to alter their behavior in the manner the advocate wants that behavior altered. We use persuasion to motivate people to change.

9.10: Motivation

You can read article after article on the different motivational theories. The focus of most is that motivation refers to forces that give us incentive to actually do something. When you wake up in the morning something stimulates you to get out of bed and get started with the day.

Motivation can come from factors outside of us. In the morning, it might be an alarm clock or a person “suggesting” we get out of bed. We call this external stimulus, extrinsic motivation. Or, you might wake up and decide on your own that you need to get started. We call this internal stimulus, intrinsic motivation.

Motivation can be positive or negative, tangible or intangible, subtle or obvious. Motivation is concerned with the process by which behavior is energized and directed. That is, what gets people excited? Although there are many approaches to motivation that critical thinkers can use to move, drive, induce, provoke, arouse, stimulate, lure, coax, influence, compel, tempt, prod, spur, push, and otherwise get someone else to accept their stand on a claim. We will look at one, Maslow’s Need Theory.

9.11: Targeting by Using the Needs Theory in Persuasion

Targeting is a motivational theory which rests on the concept that all humans are motivated by certain common needs. Targeting concludes that audience acceptance of a position is more likely to occur when the position you want them to take meets one of their needs. An insurance commercial is a classic example where a person's need for Safety can be met with the insurance product being advertised.

Targeting is focusing on the appropriate "need level" of your audience without necessarily telling them or asking them to acknowledge your needs.

> *"If you want to motivate others to cooperate with you—at home, in the office, or in a social setting—the best way is to try to see that their needs are met first,"* says Dr. Marvin Glock of Cornell University.

9.11.1: "Abraham Maslow" (Fair Use; Unknown via Wikipedia)

Abraham Maslow developed a theory of personality that has been very influential in many fields of study from business to psychology to communication. The theory may seem simplistic at first, but the more we examine it, the more we can see our own actions following the pattern, or hierarchy he suggests.

Maslow was a humanistic psychologist who believed that the behaviors of human beings were guided by external influences. These influences were either external stimuli and reinforcements or of unconscious instinctual impulses. A "healthy person" looks to achieve a high stage of consciousness and wisdom.

Maslow believed that all humans shared a hierarchy of five levels of basic needs. At the base of this pyramid are a person's basic needs. These basic needs must be met before a person can move up to the next level of needs. Until a need at a particular level is met, the person does not feel the need for the next level. For example, you need to meet your safety need before you can fulfill your love, affection or belongingness need. As a person achieves each level of need they move up to the next level of needs until they reach the highest level of needs, "*Self-Actualization*." [1]

Maslow's theory can be applied to your own life and your own goals. If you begin to realize that all humans share these same motivations, it becomes clear that all humans have something in common. Maslow's basic needs are as follows:

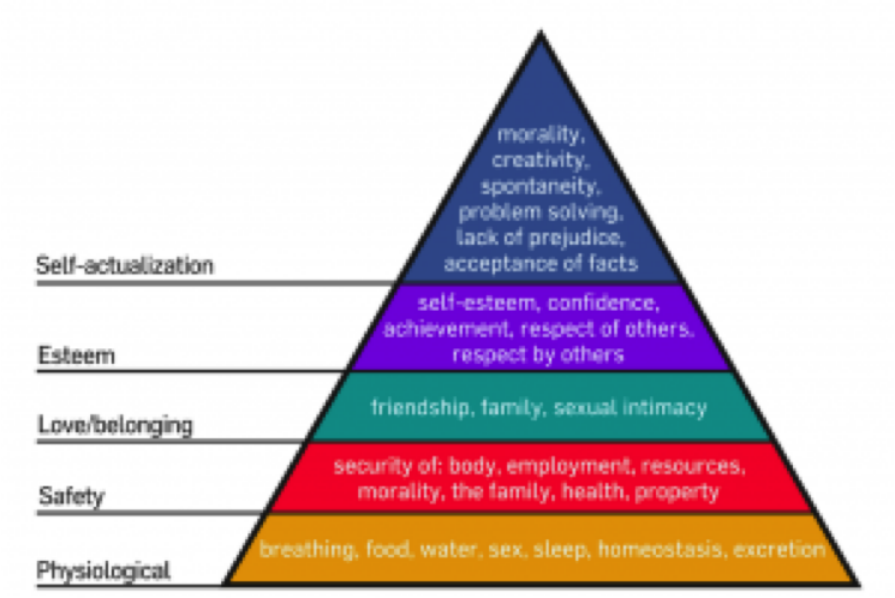
Physiological Needs: These are biological needs. They consist of needs for oxygen, food, water, and a relatively constant body temperature. They are the strongest needs, because if a person is deprived of these needs, the person will die.

Safety Needs: When all physiological needs are satisfied, and are no longer controlling thoughts and behaviors, the needs for security can become active. We have the need to feel safe and secure. To some it may be to own a gun, while for others, just locking their doors is enough. Being a member of a union or even a gang can make a person feel safe and secure. Even a loveless marriage allows for some degree of safety, which makes it difficult for people to end the relationship.

Needs of Love, Affection and Belongingness: When the needs for safety and for physiological well-being are satisfied, the next level of needs for love, affection and belongingness emerges. We want to be loved or at least appreciated. Once our physical and safety needs are met we look for ways to meet our need to be loved.

Needs for Esteem: When the first three levels of needs are satisfied the need for esteem emerges. Here we want not just to be liked, but also to be respected. This need involves both personal self-esteem and for the esteem a person obtains from others. We want to be respected for who we are and/or what we do. When this need level is satisfied, we are self-confident. When this need level is not satisfied, we experience feelings of inferiority, helplessness, and worthlessness.

Needs for Self-Actualization: When all of the previous need levels are satisfied, the need for self-actualization emerges. Self-actualization is the need to reach one's potential. What is it you can be? This level is often associated with being creative in order to achieve your potential. At this level, we are less concerned with what other people think about us, but what we think about ourselves. Have we written a paper to our standards, or merely the standards of others? At this level, instead of relying on others to judge us, we judge ourselves using our standards.



9.11.2: "Maslow's Hierarchy of Needs" (CC BY-SA 3.0; Factoryjoe via Wikimedia Commons, derivative from the original work)

Maslow writes,

> *"Even if all these needs are satisfied, we may still often (if not always) expect that a new discontent and restlessness will soon develop, unless the individual is doing what he is fitted for. A musician must make music; an artist must paint, a poet must write, if he is to be happy. What a man can be, he must be. This need we may call self-actualization."* [2]

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2. Maslow, Abraham and Deborah C. Stevens. *The Maslow Business Reader.* New York: Wiley, 2000.

9.12: Targeting Strategy

To persuade someone or some group, we want to relate our argument to the need level of our audience. We want to demonstrate that our position or argument will help them satisfy their need level.

Politicians are experts at this strategy. If a politician believes that his audience is worried about national security, that their security need is unmet, he or she will argue for increase for defense. This way if the person votes for them, then their need level of security will be met.

Targeting involves two steps:

- First, clearly identify which need level your audience is on, or at what need level the audience is most vulnerable.
- Second, create a line of reasoning that will appeal directly to that need.

Remember that no two audiences are necessarily on the same level at the same time, and that one type of reasoning will work with one audience and not with another. If your appeal is targeted to one level, and your audience is on another level, the appeal will fail.

9.13: Elaboration Likelihood Model of Targeting

The Maslow Targeting approach to persuasion is an attempt to focus on the specific needs of the audience. The Elaboration Likelihood Model describes two routes for this targeting.

Two "Routes" to Persuasion

The work of Petty and Cacioppo[1] suggest that a person has two routes to persuasion:

Central Route: Where the receiver of the persuasive message is actively involved in the process by analyzing and really considering the arguments and ideas of the message. Here the person looks to the validity and accuracy of an argument to make a decision.

Peripheral Route: Where persuasion takes place on cognitions other than the inherent strength of the argument. They may agree with the argument, because they like the source of the argument, as they may be thought of as an expert, or the listener may just feel comfortable with their looks. Celebrities endorsing products or services are appealing to the Peripheral Route. When an argument is complicated and the listener lacks either the ability or motivation to analyze it, he or she will look for a Peripheral Route to make their decision.

There is a difference in the routes that each listener selects. Research indicates that attitudes which are changed through the central route to persuasion will have different effects from attitudes changed via the peripheral route.

Individuals who change their attitude using the Central Route are more actively involved in the persuasion process than those who choose the Peripheral Route. The result then is that these new attitudes will be stronger and less resistant to change in the future.

Petty and Cacioppo explain that:

> *"Attitude changes that result mostly from processing issue-relevant arguments (central route) will show greater temporal persistence, greater prediction of behavior, and greater resistance to counter persuasion than attitude changes that result mostly from peripheral cues"*[2]

If you want to make an attitude change that is more significant in influencing the behavior of that person, more resistant to change, and will actually last longer, you want them to make their decision using the Central Route.

But as you can guess, we cannot know which route our audience will be taking. This research at least lets us know that we need to make clear, well-organized arguments or else our audience will look for Peripheral cues to make their decision.[3]

Reference

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9.14: Changing Attitude and Stasis

Critical thinkers need to remember that before anyone can be persuaded to do anything, that person must be pushed off their stasis. As long as a person is comfortable in his attitudes and behavior, he will not change. Only when a person experiences a significant amount of discomfort can an alternative attitude be substituted. This new attitude, once adopted, will allow him or her to get back to a state of comfort or stasis, restoring the balance between his or her beliefs, values, and attitudes.

As long as you are comfortable with your weight, you will never diet. But your doctor, who you really trust, says that you have to lose 35 pounds or be at risk of acquiring Type II Diabetes. This news knocks you off your stasis and to return to comfort, you go on that diet and create a new stasis.

As communication professors Reike and Sillars write:

> *"Values and beliefs function in systems. Thus, several values and beliefs are operative in a given argument over a specific attitude. Within value systems people will share values and beliefs but may also disagree on how they are applied in a specific situation. There will also be disagreements on which values are appropriate to a given situation. Changes in attitude rarely result from adding a new value or eliminating an old one. Changes will most often result from redistributing, rescaling, redeploying, and re-standardizing values."* [1] *(Rieke, 1993)*

9.14.1: "Megaphone Announcement Information" (CC0 1.0; 3dman.eu on Needpix.com)

Reference

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9.15: Last Important Thought

The last few pages have given you suggestions on how to persuade others. But just suppose that the other person's argument is actually better than yours? As strong of an advocate you are for a certain position, when arguing, especially informal and personal arguing, it is important to listen with an open mind. It is great advice to carefully listen to other points of view, first, for not only getting information, but if you listen with an open mind, you might even find out that they just might be right.

By understanding our beliefs, values and needs we can better understand the decisions we make, and why we are comfortable with those decisions.

By understanding the beliefs, values and needs of our audience we can better plan our argumentative and persuasive strategy.

And never be afraid to change your mind. that is how we intellectually grow.

9.16: The Focus of this Chapter

In this chapter I wanted to focus on how understanding the needs, values, beliefs and attitudes of the audience will help you plan an argumentative strategy that will make you more successful. The key ideas we examined were:

- Our beliefs and values lead to our attitudes which guide our behavior.
- We, as humans want to be comfortable and so we strive for stasis, or consistency, between our values, beliefs, attitudes and behavior.
- Only by first disrupting the stasis of our audience, can we persuade them to a new position.
- We can discover what motivates the audience of our argument by understanding their needs.
- Once we understand their needs, which may be different than our needs, we can "target" those needs to make a successful persuasive appeal.

CHAPTER OVERVIEW

10: Decision Making - Judging an Argument

10.1: There Are No Ties in an Argument

On the evening of September 25, 2016, Jose Martinez, a 24-year-old professional pitcher for the Florida Marlin's had an argument with his girlfriend and decided to go out for a late-night boating trip with his friends, Eddy Rivero and Emilio Macias. He invited some of his teammates who were present to join him, but they turned him down, urging him not to go because they felt it was too dangerous to be on the water late at night.

Outfielder Marcell Ozuna told him, "*Don't go out*."

But Jose was not to be deterred, he had made his decision. Eddy Rivero, the pilot of the 32-foot fishing boat, told everyone not to worry, "*Trust me it's not my time yet*."

At 3 a.m. the fishing boat crashed and all three men were killed. A pitcher with a promising career was dead, because of a decision he had made.

On September 12, 2008 48-year-old Metro Train engineer Robert Sanchez makes the decision to guide his commuter train and text at the same time. During the first three hours of his morning split shift he sends 45 text messages. With 222 people on board, Mr. Sanchez guides the train out of the Chatsworth station just outside of Los Angeles. After traveling only 1.25 miles he collides head on with a Union Pacific freight train, after failing to obey a stop sign that would have allowed the freight train to pass. Engineer Sanchez sends the last of his text messages just 22 seconds before the collision with the freight train. He never applies his breaks.

Robert Sanchez died in the crash along with 26 passengers. This was the deadliest crash in the history of the Los Angeles Metrolink. His decision to text distracted him from his ability to guide his train and the deadly accident occurred.

Every day, we make many personal decisions. Just think, the first thing you did this morning was make a decision. The alarm went off and you reach over to turn it off. Actually, you probably reached out, groped, and finally found the snooze button and ended up delaying your very first decision of the day. In about seven minutes, however, you begin making other decisions. "Should I get up or should I stay in bed?" "If I get up, what will I wear?" "What shall I eat?" "Do I have time to eat?" Your first argument of the day is with yourself. You begin to gather information, and after some sort of investigation, you make a decision.

You will be making decisions, such as selecting a career goal, an appropriate major, purchasing a car, investing money, and perhaps choosing a mate. All these decisions can be made better if critical thinking skills are learned and understood. Being a good decision-maker involves good preparation, sound reasoning, and, at times, some luck.

10.2: Human Nature and Decision-Making

The world we face now is much more complex than just a few years ago. Within our world of communication, we encounter decision after decision. In the "old days" the 70's and 80's deciding on a telephone was easy. We went to a store and picked out the phone we liked and connected it to the hard line in our home. Now we have all sorts of smart phones with a variety of services with numerous packages of options. And this is just one example of how our world is becoming increasingly complicated.

We are experiencing what many experts consider the **Age of Information.** We have access to information as we never had before, and we can more easily obtain whatever information we need to make the best possible decisions. Modern electronics gives us instant access to this information. With a computer, and an Internet connection, we can access the Internet with its vast resources. The web pages there include everything from the synopses of stories in the world's leading newspapers, to stock market reports, to a complete analysis of pending bills in Congress, to an explanation of wines, etc.

The same information that helps us master our environment can also lead to confusion about the many choices available to us within that same environment. From the information presented to us, we must be able to determine what is useful and what is useless.

As Richard Wurman writes in his book, Information Anxiety,

> *"Information is power, a world currency upon which fortunes are made and lost. And we are in a frenzy to acquire it, firm in the belief that more information means more power. But just the opposite is proving to be the case. The glut has begun to obscure the radical distinctions between data and information, between facts and knowledge, between what we need to know and what we think we should know."* [1]*(Wurman, 2000)*

Perhaps 200 years ago we could have ignored much of the information in the environment, because people were more self-sufficient. If someone needed a place to live they could homestead a few acres. A new house could be built from the cleared lumber, while food could be found on the land nearby. Most primary needs could be obtained without the help of others. The homesteader didn't need to know what was happening on the other side of the mountain, much less the other side of the world. Times have changed.

To obtain a place to live people must first have some money. If they are not independently wealthy or do not have a rich relative, they need to save for it. What type of savings account should be used? There are options from money market accounts to Treasury Bills to thousands of mutual funds. After you have been able to save enough for your down payment, which type of financing will you use? Creative financing, which has added flexibility to the purchase of a home, has presented the buyer with additional options.

Humans are decision-making creatures. From the time we make a decision to get up in the morning, until the time we make a decision to go to bed at night, we are making one decision after another. As a decision-maker, we need to be aware of how we make decisions, what external factors influence our decision-making process, and how we go about evaluating how effective our decisions are. We can start by examining the two ways humans make decisions: **involuntary decision-making** and **voluntary decision-making**.

Reference

1. Richard Saul Wurman, Information Anxiety (Indianapoilis: Prentice Hall, 200)

10.3: Involuntary Decision-Making

Think of Involuntary Decision-Making as a quick, non-thinking reaction to a situation. Suppose you want to sell your used car, and you place an ad in the newspaper, but for several weeks nothing happens. What would you do? Well, one person faced this problem. He could have lowered the price, but that might not have worked. Being a student of human nature, he hit upon a solution. He advertised his late-model car for five hundred dollars more than he had been asking, and then offered a five-hundred-dollar rebate. He sold the car within a week. The buyer responded in an involuntary fashion seeing a five-hundred-dollar rebate.

Social psychologist Robert B. Cialdini received a phone call from a confused friend. Robert's friend owned an Indian jewelry store in Arizona. In her store, she had some turquoise jewelry that wasn't being sold, even during the peak of the tourist season. She had done everything she could think of; including placing it in a more central display and having the sales staff make a special effort to push the jewelry. Still, the jewelry did not sell. Finally, just before leaving on a buying trip, she made one last effort. She left a note with her head saleswoman which said, "*Everything in this display case, price x 1/2.*" A few days later she returned to discover that all the turquoise jewelry had been sold. But the jewelry had not been sold for 1/2 price. The saleswoman misread the note and had doubled the price! The jewelry sold with no problem.[1]

In both of these examples, people allowed their habitual nature to make the decisions for them instead of making a conscious decision. The people bypassed the active thinking stage and just responded to the situation. In the first situation, the key was the rebate. In the second instance, people purchased the jewelry at twice the price originally charged. Seeing the expensive price, people assumed it was valuable, because we assume that the more expensive the item, the more valuable it must be.

Involuntary decision-making is a learned pattern of acting, thinking or feeling. Involuntary decision-making is decision making made out of habit, reflex, or repetition. We are not born with these patterns; we learn them over time. Involuntary decision making acts to conserve our higher mental functions for more challenging and demanding tasks. But then we just react to a stimulus; this is sometimes referred to as a "knee-jerk" response. Like when a doctor taps you on the knee and your leg kicks out without you making any conscious effort.

Psychologist B. F. Skinner describes the process of acquiring habits as operant conditioning. Skinner says that if our actions produce a reward, we tend to repeat those actions. If, instead, the actions produce an undesirable effect, we tend to avoid repeating them. We tell a joke and people laugh. We feel good about it, and we tell another joke. They laugh again. We now repeat the behavior because it brings us a reward. Telling jokes becomes a habit.[2]

All of us make involuntary decisions. We are given a situation and immediately we respond. Many times, this stimulus-response method is a very useful and important method of arriving at a conclusion. Suppose you are driving along in your car and someone in the next lane begins to move into your lane. Immediately, you react by swerving over. This immediate, non-thinking reaction, involuntary decision may have just saved your life.

Behavioral economist and Nobel Prize laureate, Herbert Simon wrote that when faced with complex decisions, people will resort to what he called **heuristics**. Heuristics is described as decision-making devices that simplify the process of arriving at a reasonable decision when the 'perfect' decision is unreachable or unknowable. We think of these heuristics as mental shortcuts, which allow us to make quick decisions instead of taking a long time to make a decision or even avoiding making a decision. There are a wide variety of examples of these heuristics, which are also known as cognitive biases. Often these involuntary decision-making strategies can lead to poor decisions.

10.3.1: "Decisions" by Peggy Marco, by Pixabey

Domino's Pizza Improves by Understanding Unrecognized Bias

Harvard Business Review November 28, 2016

> Patrick Doyle became CEO of Domino's Pizza in 2016 when the stock was worth $8.76 per share. Now it is worth close to $260 per share. Doyle reveals his strategy for improvement by sharing the mindset required for organizations to do big things in tough fields. Two of the great ills of executive life are what he calls, borrowing from behavioral economics, "omission bias" and "loss aversion." Omission bias is the tendency to worry more about doing something than not doing something, because everyone sees the results of a move gone badly, and few see the costs of moves not made. Loss aversion describes the tendency to play not to lose rather than play to win. "The pain of loss is double the pleasure of winning," he argues, so the natural inclination is to be cautious, even in situations that demand creativity.
>
> Leaders who want to shake things up have to be comfortable with the idea that "failure is an option," Doyle concludes. In a world of hyper-competition and nonstop disruption, playing it safe is the riskiest course of all. That's a recipe for reinvention that makes for good pizza and big change.

Anchoring Bias We, as humans, rely on the first piece of information we hear on a given subject. If we were to buy a car, and while walking to class we heard that Hondas make poor quality cars, then we will judge the rest of the information we receive on cars based on that first bit of information. It makes no difference whether that initial information was correct or not. We "anchor" the rest of our information on that first one.

First impressions can then be very important. Make sure the first thing you do in class is your best. Your instructor's natural tendency will then be to anchor the rest of your performances based on that initial impression. If you turn in a great assignment the first time and a poor assignment the second time, well that's not like you, so something must have happened. But if you do poorly on the first assignment and then great on the second assignment, an instructor might think that something suspicious happened. As they say, "You never get a second chance to make a good first impression."

Purchase Quantity Limits – An Anchor Bias

Another study by Wansink, Kent, and Hoch looked at how setting purchase quantity limits affect buying behavior. We've all seen the sign before, there's something on sale with a sign reading "Limit 12 Per Customer." Most people conclude this limit is there to protect the store from being wiped out of the sale item of overly eager bargain hunters. However, this limit serves a very different purpose.

Wansink, Kent, and Hoch designed a field study using end-aisle displays to advertise Campbell's soups for $0.79 per can. A sign was then placed on the display stating "Limit of 12 per person." The results show that purchase limits can increase sales; shoppers who bought soup from the display with no limit purchased an average of 3.3 cans of soup, whereas buyers with limits of 12 purchased an average of 7 cans of soup. The brain anchors with the number 12 and adjusts downward.[3]

Loss Aversion It has been found that people naturally want to avoid a specific loss more than receive a specific gain. This is one reason why people on trial accept a plea deal. Instead of going to trial to be proven not guilty, they select a plea deal to avoid the possibility of a longer punishment.

These are just two examples of many of these cognitive biases. Other bias's include:

Overconfidence bias: when some has a false sense of confidence

Herd mentality bias: when someone follows along with what others are doing or saying just to be part of the "herd."

Confirmation bias: the seeking out of information that agrees with an existing belief.

IKEA Effect: where people place a higher value on products they partially create

Dunning Kruger Effect: where people who are ignorant or unskilled in a given, domain tend to believe they are much more competent than they are. In simple words, "people who are too stupid to know how stupid they are".

They are all examples of involuntary decision-making. There are many more.[4, 5]

As critical thinkers, we have to be careful of how many decisions we make involuntarily, because even crossing the street, without thinking, can get us in trouble. When you cross the street do you look left then right, right then left, or do you take time out to think of which way you should look this time as you cross the street? Chances are, because of habit, you first look left then right, because you have learned that the cars closest to you will be coming from your left. You have learned this from life experiences and you don't have to think about it each time you cross the street. You turn over the job of deciding which way to look before crossing the street to your unconscious mind, while your conscious mind concentrates on other applications.

When I was in my 20's, I spent a week in Jamaica. While having a conversation with one of my traveling companions, I started to cross the street as I would if I were home in Southern California. Using the involuntary mode of decision-making, I first looked left, and then right. I was almost killed. In Jamaica, cars travel on the opposite side of the street. When I looked before crossing the street, I should have looked right. A car was there, and about to hit me. Fortunately, the sound of the oncoming car made me aware of the danger.

Helping to influence some of our involuntary decision-making are what author Vance Packard calls **Hidden Persuaders.** Packard writes,

> *"Large-scale efforts are being made, often with impressive success, to channel our unthinking habits, our purchasing decisions, and our thought processes by the use of insights gleaned from psychiatry and the social sciences. Typically, these efforts take place beneath our level of awareness; so that the appeals, which move us, are often, in a sense, 'hidden.' The result is that many of us are being influenced and manipulated, far more than we realize, in the patterns of our everyday lives."* [6]*(Packard, 1991)*

There are four distinct methods of "hidden" persuasion. One way is through the use of visual stimuli. An example would be to super impose an image into a movie by flashing a message so briefly that a person is unaware of it. A second method uses accelerated speech. This usually happens when music is played over low audible messages, such as the Muzak system. The third method involves the use of embedded images in a print advertisement. It is the hiding of images in larger images that influence the viewer to act or respond in a certain way. The fourth method involves a suggestiveness that would not normally be seen at first glance. It would imply much more than it appeared to, such as in a picture or the use of language.

Hidden messages gain influence from the fact that they circumvent the critical functions of the conscious mind, and therefore are potentially more powerful than ordinary suggestions, because the unconscious mind is incapable of critical refusal of these sub-conscious suggestions. Researcher Louis Cheskin says,

> *"Hidden persuaders allow us to make decisions, guided not by conscious thought, but by unconscious reaction to the images, language, and designs which, in the subconscious, are associated with the product."*

Hidden persuaders can come in several forms. A typical supermarket is purposely designed to influence the buying habits of its customers. First, the bakery is located near the entrance of the market. It is known that the aroma of freshly baked products will stimulate hunger in the customer and cause him to purchase more. The storeowner places the four most purchased item groups, dairy, meat, bread, and vegetables, as far from each other as possible. The customer must therefore pass through rows of other food items before coming to one of the four groups. The storeowner hopes that additional food products will catch the customer's eye and that additional purchases will be made.

In the same way, fast food restaurants use seats that place undue strain on one's spine (called the Larsen chair) if you sit in them longer than 15 minutes at a time. This encourages you to eat quickly and then leave so others can sit. Las Vegas casinos are designed without windows or clocks. They want you to lose track of time and keep gambling. Many retail stores use background music, masked with anti-shoplifting messages and/or store product advertisements called Muzak, to control theft or to influence customer purchases. Newspaper and magazine advertisements contain embedded pictures, often of a sexual nature, in order to catch your mind's attention, so it will store the name of the product in your memory for future reference.

Do We Make Poorer Decisions as We Age?

From the Los Angeles Times – October 1, 2013

A study published recently in the journal of the Proceedings of the National Academy of Sciences suggests that our ability to make wise choices changes over time, and actually declines with old age. In fact, the study found that in certain situations, the decision-making ability of people older than 65 was worse than that of adolescents.

"We found that even the healthiest of elders show profoundly compromised decision-making," wrote senior study author Ifat Levy, an assistant professor of comparative medicine and neurobiology at Yale University in Connecticut.

Seniors "disturbingly" chose irrational wager options 25% of the time, according to the study authors. By contrast, adolescents chose irrational options 10% of the time, while young and midlife adults chose them only 5% of the time.

Seniors were far more cautious when choosing between two possible cash gains. When seniors faced a choice between two losses, they chose the riskier option with the higher potential loss.

> The authors argued that the pattern of decision-making among elder participants in the study was not a function of illness or age-related dementia.
>
> "As for the risk preferences, it may be that as they are getting closer to the end of their life, people assume that it is less likely for uncertain events to actually happen to them, which drives them to take less risks with gains, but more risks with losses," Levy said.1

Although it is necessary and useful for us to turn over many of our minor decision functions to our subconscious mind, we may also be guilty of turning over more major decisions to this involuntary process without understanding the consequences.

Reference

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4. corporatefinanceinstitute.co...ognitive-bias/ (Accessed December 12, 2019)
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6. Vance Packard, Hidden Persuaders (London: Penguin, 1991)

10.4: Voluntary Decision-Making

In the voluntary decision-making mode, the decision-maker examines criteria such as: the decision-making situation, the desired end-goals, the people involved, the occasion, and consciously applies his or her brain-processing skills to these criteria, in order to make the best possible decision. When making a voluntary decision, the person applies their cognitive skills to a problem in an attempt to arrive at a quality decision or design an effective argument.

The voluntary method of decision-making is generally more challenging and time consuming. This method of decision-making allows a person to examine all of the information available, all of the decision alternatives known, and all of the decision consequences they can within the time limits they have before he or she freely selects one of the alternatives.

10.5: Influences on Voluntary Decision-Making

Voluntary decision-making means that the decision-maker is an active participant in the process of making a decision. Yet, even when making a voluntary decision, a person can be influenced by: **credible sources, authority figures, one's peers, Groupthink and the interpersonal needs for affection, inclusion and control.**

Credible sources are people we trust and look to for help, guidance, or direction in making a decision. They may have no special knowledge or insight, but we tend to believe what they have to say. This may include good friends, members of our family, or other trustworthy people. When companies want to market a product, they use a spokesman they believe an audience will trust. The more we trust a person the more credibility he or she is said to possess. The more credibility, or ethos, people have, the more likely we are to trust them and let them influence the decisions we make.

Authority figures are those individuals or institutions we accept as being knowledgeable on the topic we are examining. When confronted with the need to make a critical decision or argument, we often turn to those people we consider to be **authority figures** for help. Social psychologist Stanley Milgram of Yale University has performed a series of experiments, which demonstrates the degree of control people we consider authorities have over us. He was curious as to how far a person would go to conform to the wishes of a person he or she did not want to disappoint.[1]

In Milgram's classic experiment, a person is told by a person who appears to be an authority, to apply an ever-increasing electrical shock to a second person, who is in on the experiment, when that person fails to give a correct answer. Although he is not really connected to the electrical current, whenever the button is pressed, the second person screams as if he is being electrocuted. The shocks appear to be causing more and more pain and you have to make a decision to continue administering the shocks, or discontinue them.

How far would you go? If you are the average person Milgram encountered, you might continue applying what you thought was an electrical shock until you "killed" the other person.

10.5.1: "Stanley Milgram" by Harvard Department of Psychology is licensed under fair use

Milgram wrote,

> *"I observed a mature and initially poised businessman enter the laboratory smiling and confident. Within 20 minutes, he was reduced to a twitching, stuttering wreck, rapidly approaching a point of nervous collapse and yet he obeyed to the end."* [2]
>
> *"It may be that we are puppets – puppets controlled by the strings of society. But at least we are puppets with perception, with awareness. And perhaps our awareness is the first step to our liberation." --Stanley Milgram* [3]

After 10 years of continuous research Milgram concluded in his book, Obedience to Authority, that, in general, most people are highly susceptible to the influence of authority figures. When working with those they consider an authority figure, people tend to make decisions based on what they think that authority figure would want them to do.

Peer influence exists when a person is motivated to make a decision based primarily on the influence of those he or she wants to be identified with and be accepted by. Peer influence occurs when an individual voluntarily seeks the support or approval or goodwill of others as the basis for making a decision.

There is an entire range of influence we get from others, ranging from intense peer influence to total independence from others' influence. As the scale of peer influence on a person increases, he/she becomes increasingly dependent on others and less likely to make his or her own decisions.

Peer pressure can be very influential. Research has discovered, to no one's surprise, that the initial decision for using drugs, having sex for the first time, smoking, and even shoplifting, is made as a result of peer pressure. When we decide that the only acceptable

decision is the one that conforms to our peers' point of view, we severely limit our alternatives. The strength of peer influence rests with the desire to conform to others. Experts on peer influence say that from age twelve on, a person is likely to consider how their peers will view them, based on the decision they are about to make.

In his famous conformity experiments, Solomon Asch set out to determine what happens when people are asked to estimate something that is visually very clear.

10.5.2: "Solomon Asch" by New York Times is licensed under Fair Use

Dr. Asch showed a group of ten people a line, and then asked them which of another group of lines was of the same length. The subjects did not know that the other nine members of the group were in on the experiment, and had been instructed to give the wrong answer. At a point in time, all nine would consistently agree that an unequal line was the correct answer. The subjects were faced with a conflict between what their senses were telling them and what they heard from a majority of those they believed were their fellow group members.

Dr. Asch found that a significant percentage, 75%, of the subjects agreed with the group instead of trusting their own judgment at least one time and conformed to the group nearly one-third of the time. He concluded that peer groups influence people even if the people in the groups are strangers.[4]

Reference

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3. goodreads, "Stanley Milgram Quotes," https://www.goodreads.com/author/quo...tanley_Milgram (accessed November 6, 2019)
4. "Asch Conformity Experiments," 2019, https://www.verywellmind.com/the-asc...iments-2794996 (accessed November 6, 2019)

10.6: Groupthink

After studying groups of very intelligent people who made very poor decisions, Irving Janis described a problem he referred to as Groupthink. Here, the actual group process effects decision-making. In Groupthink, the desire for group cohesion often becomes more important than making a quality decision. Instead of disagreeing and starting an argument with the other group members, a person will just go along with the group, so as not to be isolated and left out. This action is also referred to as the mismanagement of disagreement. Members disagree, but the need to be part of the group keeps them silent.

A common Groupthink experience occurs in marriage. A spouse will experience Groupthink when he or she decides not to argue with a decision that is being discussed. They may disagree with the decision being made, but they decide that harmony within the marriage is more important than their disagreement with the decision. We often refer to this as not "*rocking the boat*." In this situation spouses voluntarily give up conflicting views to preserve the family's harmony and closeness.

In our professional lives, we will often be asked to be part of a group or organization that needs to make decisions. Group interaction can create additional challenges to effective decision-making as demonstrated in the 1986 decision to launch the Challenger space shuttle.

After the embarrassment of several days of postponing the launch, NASA officials at Cape Canaveral decided to allow the Challenger to lift off. Just hours before the fateful launch, frigid temperatures, in the mid 20s, and dangerous wind gusts of 35 miles per hour had been recorded. Nevertheless, the signal to go ahead with the launch was initiated. All, seemed to go well at first. Shirley Green, the new public relations officer, remembered thinking, "*It is so beautiful. It seems so perfect*."

Unfortunately, the flight was anything but perfect. Less than half a second after booster ignition, just as the shuttle began to lift off the pad, a white, then a black puff of smoke gushed from a joint between two segments of the shuttle's right booster. Just slightly over a minute into the flight, as Shirley Green along with millions of Americans were watching, a huge fireball appeared where the shuttle had been. There was complete silence in the control room. For a moment, there was no sound. She gripped the shoulder of Chuck Hollingshead, the Kennedy Space Center's veteran public affairs officer. He turned to face her. "*Is it gone*?" she asked. "*Yes*," Hollingshead said, shaking his head, "*It is gone*."

Within days a Presidential Commission was established to investigate the tragedy. Reports from this committee have suggested that the decision to launch the space shuttle was totally wrong. There appears to have been a growing anxiety among the launch crew. Past successes may have given the staff the impression that nothing could go wrong.

Important information, such as the booster project engineers protesting the launch, other engineers reporting that the weather was too cold, and tests revealing abnormal "*cold spots*" on the lower right hand booster rocket, was not conveyed to the people making the launch decision for fear of being ostracized.

When people gather in a group to make a decision, actual communication problems can occur that will lead to a poor decision. In this case, **Groupthink** took place. Groupthink is a type of voluntary group decision-making that occurs when group members don't really examine the alternatives and instead reach the agreement they feel others want.

CIA and Groupthink

10.6.1: "CIA Seal" by U.S. Federal Government is in the Public Domain

July 10, 2004

According to a scathing report released by the Senate Intelligence Committee, the United States went to war with Iraq on the basis of flawed intelligence assessments.

> The report documented sweeping and systemic failures at the CIA and other U.S. intelligence agencies that led to the erroneous conclusions that Iraq had stockpiles of chemical and biological weapons and was reconstituting its efforts to build a nuclear bomb.
>
> The report continued by saying that the CIA analysts suffered a case of Groupthink that rendered them incapable of considering that Iraq might have dismantled its weapons programs.

As Irving Janis stated:

> "*Group members adopt a soft line of criticism, even in their own thinking. At their meetings all the members are amiable and seek complete concurrence on every important issue, with no bickering or conflict to spoil the cozy atmosphere. This is known as being yes men. Here you agree with what the person in charge is saying, not because you believe in what is being said, but because you don't want to spoil that we-feeling.*"[1]

To avoid Groupthink

If you are in a leadership position of any group, delay stating your opinion. Let others share their ideas first or else they may just agree with you to go along with what you are saying

Sincerely ask for differences of opinions. Let others know you really do want to hear different points of view.

Either be or assign a "devil's advocate." That is force someone to disagree and make arguments against the decision that is being made. The term "devil's advocate" was started in the early Catholic Church, when a person was being considered for sainthood. If the process was moving along too easily, without opposition, someone was assigned to speak against that person from becoming a saint. In effect, that person was "advocating for the devil."

People don't usually want to cause a problem in their group. They do not want to "*rock the boat*." Being more knowledgeable of the process of decision-making and our decision-making style could avoid group and individual tragedies.

Interpersonal needs of inclusion, control and affection also guide our decision-making process. William Schutz had identified three interpersonal needs we strive to meet: the need for affection, the need for inclusion, and the need for control. He calls this his Interpersonal Needs Theory. Our desire to fulfill these needs we have influences the voluntary decisions we make.

The need for affection is our desire to be loved and in turn, to give love. This includes the desire for emotional intimacy and close relationships.

The need for inclusion is the need to be part of a group, organization or family. This is the desire to be a part of something important to you. It could be your family or even a supporter of an athletic team.

The need for control is the need to exert some real power of influence over the decision-making in a relationship or group where you are a member. When your ideas are respected, you are meeting this need.[2]

We begin to direct our decisions toward the outcomes that best meet our needs. If we have a need that is only fulfilled by one or two groups, we will have the tendency to make decisions that allow us to fulfill that need by choosing one group over another. Imagine that a control need is important to us and our family does not meet that need, but another group does. Schutz's theory suggest that we would make decisions that support that group, instead of our family. The desire to meet our needs becomes a powerful influence on our decision-making process.

Whether our decisions are made subconsciously, out of habit, reflex or repetition, or consciously, with our active involvement in the decision-making situation, all of us at times fall prey to undisciplined or weak thinking. Because we are always not at the top of peak performance, we do not always think clearly, precisely, accurately, logically, deeply or broad-mindedly. We do not always monitor and direct our thinking effectively. We sometimes are victims to the traps and illusions of sloppy thinking.

10.6.2: "Decisions Right False" by geralt by Pixabey

Reference

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10.7: Decision Making and Probability

Other than a reflex reaction, human decision-making is not some random act. We make decisions based on the probabilities of the outcome. The following three quotes provide an overall view of how probability affects our decision-making.

> *Probability is associated with a high degree of likelihood that a conclusion is valid. In critical thinking, probability is how likely a target audience believes something will become reality.*
>
> --Austin J. Freeley Argumentation and Debate[1]
>
> *At any given moment, we make our estimate of probabilities on the basis of the evidence available to us at that time. And, we can never reach more than a highly probable conclusion, for ALL the facts can never be known.*
>
> --Lionel Ruby and Robert Yarber The Art of Making Sense 1978[2]
>
> *People make decisions! To be sure, people sometimes make stupid, uninformed decision. They make highly informed decisions that sometimes turn out badly. They can learn to do a better job of making decisions.*
>
> --Richard Reike and Malcom Sillars Argumentation and Decision-Making Process[3]

All three of these quotes refer to the key idea that we make decisions based on the probability of the outcome from the limited information provided. Because of this, we can never be absolutely sure of the outcome of that decision. Therefore, we operate within a range of possibilities that our decision is the correct decision. We look at the probabilities of the outcomes to each decision we make.

No two people will view probability, or the risk involved, the same way. If you are speeding along the highway at 15 miles per hour over the speed limit, what is the probability that you will get a ticket? You might decide that it is only 20% so you continue at that speed. Someone else may decide that 20% is too big a risk to take and slow down. But assume you hear on your navigation app that there may be a police officer up ahead. You believe that the probability of getting a ticket is now closer to 90%. Now you decide to slow down.

Both courts of law and science operate using probability. Neither has to prove their claim, legal charges, or hypothesis with 100% certainty. Both deal in the probability of the decision claim being made. The claim is accepted when the probability reaches the "Threshold" of the person or persons making the decision

Reference

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10.8: Threshold of Decision Making

Threshold refers to the degree of validity on the **Continuum of Certainty**, that the advocate must demonstrate before an audience will commit to a decision. Whether you are attempting to gain audience acceptance for a point of view or making a personal decision, you need to reach the threshold of acceptance of your audience. If you are attempting to make a decision on your own, you are the audience and are waiting until the argument is valid enough to reach your threshold.

The Continuum of Certainty is a measurement of how sure you are on a decision from totally uncertain to ninety-nine percent convinced. As we have seen, a good critical thinker is never 100% convinced of anything, that way they stay open-minded.

THE CONTINUUM OF ARGUMENTATIVE CERTAINTY

0%----------25%----------50%----------75%----------99%

Opinion Assertion Inference "Fact"

The Threshold is that point on the continuum where a person is sure enough of what is being argued to actually believe it or accept it. This is what we refer to as reaching the audience's threshold or breakthrough point. They may not be totally convinced, but they are convinced enough to agree with the speaker's point. Most audiences have a threshold with respect to granting adherence to a particular point of view being advanced.

The following chart shows different scientific levels on the Continuum of Certainty.

Different standards of proof are required by different courts in order to establish guilt/liability. Criminal courts demand the highest standard of proof of any court. This is because a finding of guilt can result in the accused losing his or her liberty. In order for an accused to be found guilty, the evidence must establish **beyond a reasonable doubt** that he or she is guilty. There must be no reasonable explanation for what happened other than that the accused did it. If there is any other reasonable explanation, the accused will not be found guilty. This is not a simple concept either to explain or to understand, and it is likely that often juries make findings of guilt or innocence, without fully comprehending this important principle of criminal law.

Civil courts set the threshold as "**preponderance of evidence**." In law, the term means "the greater weight." A "preponderance of the evidence" means that the thing alleged is more likely than not to be the case. Unlike the "beyond a reasonable doubt" measure of certainty, the "preponderance of the evidence" measure means that if a jury sees a thing as 51 percent likely to be correct and 49 percent likely to be incorrect, they should decide that it is correct. This is how a civil court case is decided, like The People's Court or any of the other court shows on television.

Likelihood Terminology	Likelihood of the occurrence/ outcome
Virtually certain	> 99% probability
Extremely likely	> 95% probability
Very likely	> 90% probability
Likely	> 66% probability
More likely than not	> 50% probability
About as likely as not	33 to 66% probability
Unlikely	< 33% probability
Very unlikely	< 10% probability
Extremely unlikely	< 5% probability
Exceptionally unlikely	< 1% probability

10.8.1: Intergovernmental Panel on Climate Change Fourth Assessment Report: Climate Change 2007[1]

The critical thinker keeps the following in mind when arguing outside the courtroom:

No two people necessarily have the same threshold on the same topics. Some people will accept an argument if it can be proven that it would possibly be the best alternative, that it is potentially capable of happening. Some others must be shown that it is plausible, that it is believable and reasonable. Still others must be persuaded that it is probably the best alternative, that is likely to become a reality. Some will hold out for near certainty that it is sure to happen.

Audience adherence to a point of view is not possible until an advocate reaches the threshold of his or her target audience. Critical thinkers need to determine the threshold level of their audience for making a decision. They need to know what level of proof they will be required to meet before an audience will agree with them. The closer to certainty the threshold of the audience is, the better the argument the advocate will need in order to be able to reach it.

On some topics, people may have thresholds that cannot be reached at all. Dogmatic people and apathetic people are two such audiences. Dogmatic people because they are closed-minded. In argumentation, no amount of evidence, documentation, scholarship, or facts can produce a conclusion that is 100% certain. Generally, arguing with dogmatic people is unproductive and frustrating, because they already are certain about their point of view, and thus have no interest in being open-minded to new information, much less to an opposing viewpoint. A friend of mine was arguing global warming with another man. In frustration, he finally asked him, "*Is there any amount of proof that I could show you that would convince you that global warming exists?*" His reply was, "*No*." This person was so dogmatic they had no threshold that could be reached. Apathetic people generally have no defined threshold as a result of their "I don't care" attitude.

Threshold will also vary depending on the topic. Let's say that you have just received a proposal of marriage. What threshold do you hold for granting adherence to the proposal? Given different threshold levels you would need arguments of different strength before you would say, "*Yes*."

- **Possibility** You would say yes just because you were asked. Here, if you just think it might work, you go for it.
- **Plausibility** You will need some demonstrated proof before saying yes like an engagement ring.
- **Probability** You would have to include assurances that the marriage would work before saying yes. A demonstration of love and guarantees of future security would be required.
- **Near Certainty** You will need to be certain you are making the right decision. A long engagement and contractual obligations will be needed in order for you to make up your mind.

Threshold is affected by both psychological and physiological conditions. For example, if you have just made a decision to purchase an expensive car, your threshold in regard to buying additional "lower priced" options will be lowered. What's another $300 for a graphic equalizer, when you have just spent $40,000 on the car?

Threshold can be lowered. Critical thinkers recognize that ambiance, creating favorable conditions like right setting, right time, right place, right occasion, for argumentation to take place, is as important to the argument as it is to other forms of interpersonal communication. If you want a better chance for a yes when asking your boss for a raise, make sure you ask him or her when they are in a good mood, maybe just after you have done a great job at an assigned task. Creating the right kind of argumentative environment can actually soften or lower the threshold of an audience.

As Reike and Sillars write in their book, ARGUMENTATION AND THE DECISION-MAKING PROCESS,

> *"The decision-making process occurs every day and is ongoing. Arguments are applied to the entire spectrum of communication situations – from casual interpersonal or small group interactions to more formal situations of conference, debate, or negotiation. The decision-making process may require that you understand the special demands which some kinds of argumentation place on you because of their special rules."* [2]*(Rieke, 1993)*

Reference

1. IPCC, 2007: Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, Pachauri, R.K and Reisinger, A. (eds.)]. IPCC, Geneva, Switzerland, 104 pp
2. Richard D. Rieke and Malcolm Sillars. Argumentation and Critical Decision Making. (New York: HaperCollins Rhetoric and Society Series, 1993)

10.9: Key Guidelines for Critical Decision Making

From their textbook, Psychology 12th edition, Carole Wade, Carol Tavris and AlanSwinkels list some important and useful guidelines for critical decision-making.

Ask questions; be willing to wonder. Always be on the lookout for questions that have not been answered by the experts in the field or by the media. Be willing to ask “What’s wrong here?’ and/or “Why is this the way it is,” and “How did it come to be that way?”

Define the problem. An inadequate formulation of a question can produce misleading or incomplete answers. Ask neutral questions that don’t presuppose answers.

What evidence supports or refutes this argument and its opposition? Just because many people believe, including so-called experts, it doesn’t make it so.

Analyze assumptions and biases. All of us are subject to biases, beliefs that prevent us from being impartial. Evaluate the assumptions and biases that lie behind the arguments, including your own.

Control emotional reasoning. “If I feel this way, it must be true.” Passionate commitment to a view can motivate a person to think boldly without fear of what others will say, but when “gut feelings” replace clear thinking, the results can be disastrous.

Don’t oversimplify. Look beyond the obvious, rest easy generalizations, and reject either/or thinking. Don’t argue solely by anecdote.

Consider other interpretations. Formulate hypotheses that offer reasonable explanations of characteristics, behavior, and events.

Tolerate uncertainty. Sometimes the evidence merely allows us to draw tentative conclusions. Don’t be afraid to say, “I don’t know.” Don’t demand “the answer.”[1]

Reference

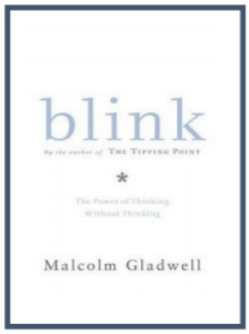
1. Wade, Carol and Carol Tavris and Alan Swinkels. Psychology. Boston: Pearson, 2017.

10.10: Our Critical Decision-Making Style

There is no one ultimate decision-making style. Each of us develops our own style of making decisions. Understanding the strengths and weaknesses of our style is an important aid to help us make higher quality decisions. We call this metacognitive understanding. Metacognition means, “Thinking about thinking.” So, to take a look at how we think, we need to determine our comfortable decision-making style.

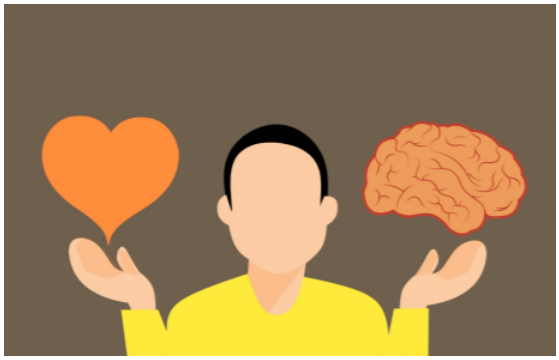
Have you ever known the answer to a situation instantly? Did you have a “gut feeling” that something was right or wrong? Or were you just “thinking fast?” In an attempt to explain what happens here, Author Malcolm Gladwell wrote a book titled *Blink*. Malcolm Gladwell explains his ideas in an interview.

> *“It's a book about rapid cognition, about the kind of thinking that happens in a blink of an eye. When you meet someone for the first time, or walk into a house you are thinking of buying, or read the first few sentences of a book, your mind takes about two seconds to jump to a series of conclusions. Well, "Blink" is a book about those two seconds, because I think those instant conclusions that we reach are really powerful and really important and, occasionally, really good.”*



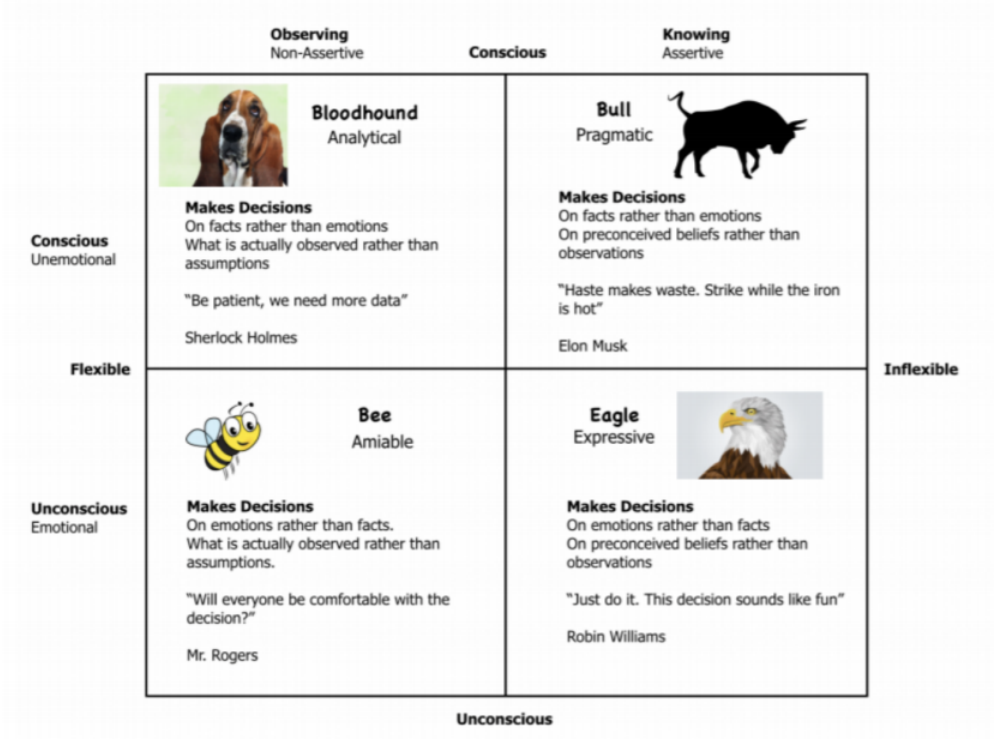
10.10.1: "Blink Bookcover" by Lee Davy on flickr

You could also say that it's a book about intuition, except that I don't like that word. In fact, it never appears in "Blink." Intuition strikes me as a concept we use to describe emotional reactions, gut feelings--thoughts and impressions that don't seem entirely rational. But I think that what goes on in that first two seconds is perfectly rational. It's thinking—it’s just thinking that moves a little faster and operates a little more mysteriously than the kind of deliberate, conscious decision-making that we usually associate with "thinking." In "Blink" I'm trying to understand those two seconds. What is going on inside our heads when we engage in rapid cognition? When are snap judgments good and when are they not?



10.10.2: "Decision making" is in the Public Domain, CC0

What kinds of things can we do to make our powers of rapid cognition better In his book, The Confident Decision Maker, (Dawson, 1993) [1]*Roger Dawson describes four distinct decision making styles and how you know which one best fits you. The following chart is based on his ideas.*



10.10.3: "Decision Style Diagram" by J. Marteney is licensed under CC BY 3.0

Understanding the Decision Making Chart

The horizontal line of the chart describes how you react to decisions. Do you react to what you already know or what you observe? Moving to the right on the line is the inflexible thinker who makes decision on what he already knows, while moving to the left we find a more flexible decision-maker who relies more on what he observes.

The vertical line is the way people process information in making a decision. Conscious thought is the gathering of information through the five senses, while with the unconscious thought you just "feel" the information. As you move up the line, the more conscious you are in using information.

Your style is a combination of these two axes. There is no best style. Each style has strengths and challenges. More likely you are a combination of styles, but usually there would be one style that plays a more significant part in your personal decision-making.

The Decision-Making Styles Explained

The Bloodhound is an analytical decision-maker, who makes decisions on facts rather than feelings; On what is observed rather than pre-established emotions. They consciously and unemotionally observe the situation in a non-assertive manner. The Bloodhound is a cautious decision-maker, who relies on more and more information to base their decision. Their motto: "Let's not jump into this, we need more data."

The Bull is a pragmatic-decision maker, who makes decisions on facts rather than feelings; on preconceived beliefs, rather than observation. They consciously and unemotionally feel they know what is going on and conduct themselves in an assertive manner. The Bull has confidence in making decisions quickly. Their motto: "Strike while the iron is hot."

The Eagle is an extroverted decision-maker, who makes decisions on feelings rather than facts; on preconceived beliefs, rather than observation. They unconsciously and emotionally feel they can make decisions in a knowing and assertive manner. The Eagle makes quick and often not well thought out decisions, but is enthusiastic, creative and focuses on people. Their motto: "This idea sounds like fun."

The Bee is an amiable and friendly decision-maker who makes decisions based on feeling rather than fact. They make their decisions on what they observe rather than pre-established emotions. They unconsciously and emotionally observe the situation in a non-assertive manner. The Bee does struggle with decisions that involve change and shows sincere concern for others. Their motto: "Will we be comfortable with the decision?"

The Bull and the Eagle styles (located to the right of the chart) have pretty much made up their minds before they go into the decision-making arena. The Bloodhound and the Bee are much more open to new input.

The Bull and the Bloodhound make their decisions based on facts. The Eagle and the Bee are more aware of things without being conscious of them. They know in their heart the problems, but couldn't tell you why they know them.

Which style best describes you? There are two important ideas about your decision-making style you need to know:

1. You are actually all four styles, there is just one that is usually preferable.
2. Your situation or environment may cause you to respond in a style that is not your preference.

Making decisions has become an increasingly complex challenge for most of us. Very few decisions are made with absolute certainty, because complete knowledge about all of the alternatives is seldom possible. Good decisions come from disciplined thinking.

How should critical thinkers evaluate arguments to make their decisions? The easiest way is to focus on the outcomes, the results of the argumentative process. However, since some decision-making outcomes can be influenced to more or less of a degree by chance, looking at only the results can be misleading and downplay the importance of good preparation and sound reasoning. Critical thinkers need to examine not only the outcome of a decision, but the process used to make that decision. Only by looking at both can we determine why the decision succeeded or failed in obtaining its desired outcome.

We also need to be aware of the ethical implications of the decisions we make. Decisions we make can impact the health and welfare, not only of ourselves, but our family, our community, our state, our nation, and even our world.

As Warnick and Inch write in their book, Critical Thinking and Argumentation,

> *"We must be aware of the quality of our arguments and knowledgeable about standards that will enable us to distinguish arguments that are ethically or morally right from those that are wrong. Millions of people in Europe died because the Nazis believed Adolf Hitler's arguments that their misfortunes were caused by the Jewish people. Many lives and careers were ruined in the early 1950s when the public believed Senator Joseph McCarthy's claims and accusations about Communist infiltration in all aspects of life."* [2]*(Warnick, 1989)*

Examining our decisions and decision-making style allows us to improve our own personal style and thus take more control of our lives.

Reference

1. Roger Dawson, The Confident Decision Maker: How to Make the Right Business and Personal Decisions Everytime. (Petaling Jaya: Advantage Quest Publications, 1993)
2. Barbara Warnick and Inch, Edward S. Critical thinking and Communication (New York: Macmillan Publishing Company, 1989)

10.11: The Focus of This Chapter

In this chapter I wanted to focus on how our unique style of decision-making leads us to make our personal decisions.

- Involuntary decision-making allows us to function but there are many decision-making biases, or subconscious shortcuts, that can lead to poor decisions.
- Voluntary decision-making includes the use of our critical thinking skills to make effective decisions. We can learn from our past decisions, whether they had good or poor outcomes, to improve our decision skills.
- We all have used “Continuum of Certainty,” where we measure the strength of our conviction on a decision. Once we reach our “Threshold” then a decision has been made.
- There is not one universal, correct style of decision-making. We all have a style that fits our personality. In this chapter I presented four of those styles.

CHAPTER OVERVIEW

11: Discovering, Examining and Improving Our Reality

11.1: Is What We Are Arguing Real or an Illusion?

Notre Dame All American linebacker Manti Te'o was in love with Stanford University student, Lennay Kekua. They met online and were frequently online together sharing experiences as young lovers do. One thing they shared was her battle with leukemia. Even though they had not yet met in person, their love for each other grew. Then a tragedy occurred. On September 11, 2012, Lennay died in a car accident. And although Manti had never met her in person, he was devastated. But even in his grief, he continued his football season as he had promised Lennay, became an All American, and was drafted by the San Diego Chargers.

Manti's story now takes a strange twist. In the following January, after an anonymous tip, two reporters reveal that there was no such person as Lennay Kedua. She was a hoax created by family acquaintance, Ronaiah Tuiasosopo.

Manti Te'o had been led to believe that such a girl existed and for several months he carried on a virtual relationship with her. The pictures of "Lannay" were actually those of a former classmate of Tuiasosopo. On a Dr. Phil television show Ronaiah Tuiasosopo confessed that he was very attracted to Manti and this was his way of getting close to him.

Manti Te'o believed that this girl Lennay existed. The reality he created was that she lived and was his girlfriend and it was this reality that guided his decisions and actions.[1]

Dr. Louis Gottschalk is a renowned psychiatrist from the University of California, Irvine. It is estimated that he lost between $1 and $3 million to a Nigerian Internet scam. In 1995, Dr. Gottschalk received an unsolicited email from a "government official" or "banker" looking for someone to help him get a significant amount of money out of that country for a portion of the total amount. Dr. Gottschalk began sending money.

For the next 10 years, Dr. Gottschalk was a victim of the "scam." He even traveled to Nigeria and met with a person he knew there only as "The General." In the end, he never made a cent. The reality he created in his head was false and the decisions he made on that reality cost him dearly.[2]

Finally, have you ever looked at a boyfriend, girlfriend, husband or wife of a friend of yours and wonder, "What is wrong with my friend?" "Can't my friend see that this person is all wrong as a companion?"

These examples lead us to the question, "Why do people see the world in so many different ways? Or to put it another way, "Why do different people see the same situation and draw such different conclusions?" An example of this was the "Occupy Wall Street" movement that was interpreted in many different ways.

11.1.1: "Wall Street Bull" (CC BY-SA 2.0; Glen Scarborough via flickr)

Beginning September 17, 2011 activists began camping in Zuccotti Park located in the midst of Wall Street. Their purpose was to publicize what they felt was an inequity of the distribution of wealth in the United States. Their slogan was, "We are the 99%" which was intended to emphasize the difference in wealth between the wealthy 1% of the population and the other 99% of the people in the USA.

How was the Occupy Wall Street movement viewed? As the hero spokespeople for the masses, as the dregs of society who need to get a job, and everything in between. There were a wide variety of interpretations of this action.

> Radio talk show host, Rush Limbaugh told his audience, "*When I was 10 years old I was more self-sufficient than this parade of human debris calling itself Occupy Wall Street.*"
>
> President Barack Obama viewed them as expressing "*the frustrations the American people feel.*"
>
> Former U.S. Representative Eric Cantor described the movement as a "*growing mob*."

According to Colin Powell, former U.S. Secretary of State, *"Demonstrating like this is as American as apple pie. We've been marching up and down and demonstrating throughout our history…"*

As Michael Bloomberg, New York City Mayor at the time, stated, *"What they're trying to do is take the jobs away from people working in this city."*

Jon Stewart, comedy news anchor of the Daily Show, tried to figure this out when he said, *"So, (Tea Party) rage against duly elected government is patriotic – quintessentially American – whereas (Occupy Wall Street) rage against multi-national shareholder –accountable corporations are anti-American. OK, gotcha."*

Fox News Anchor, Steve Doocy, compared them and their protests against the United States in the Arab world. *"That almost looks like what happened last week in Libya and in Cairo."*

We all can observe the same thing, but "see" something different. This is common to all of us. What we have done is create a "personal reality" based on a shared environment. Many arguments begin here, where the purpose is to resolve this difference of interpretation in an attempt to determine a common **reality.**

Key point: We don't argue what is actually out there in our environment, but instead we argue the realities we create from that environment. We don't argue if the Occupy Wall Street movement is good or bad, we argue the reality we have created in our heads about whether the Occupy Wall Street movement is good or bad. Or to put in another way, we don't argue if the actual Cowboys are a better football team than the Packers. We argue the realities we've created in our minds of these two teams.

We use our perception process to create our reality. What do you see in this picture?

11.1.2: "German postcard from 1888" (Public Domain; Unknown via Wikimedia Commons)

Do you see an old woman or a young lady? Do you see both?

This chapter is all about how we use the perception process to create realities about people, events, and things in our environment. And, finally, how we can create the most accurate reality possible.

Reference

1. Los Angeles Times. "Notre Dame: Manti Te'o victim of hoax." *Los Angeles Times*, 17 Jan. 2013, https://www.latimes.com/74058589-132.html.
2. Lobdell, William. "UCI Psychiatrist Bilked by Nigerian E-Mails, Suit Says." *Los Angeles Times*, 2 Mar. 2006, https://www.latimes.com/archives/la-xpm-2006-mar-02-me-nigerian2-story.html. Accessed 6 November 2019.

11.2: What is Reality

Reality is not what is real. What is commonly called “reality” is created in the mind, based on an environment we observe. We all may share a common environment, like this textbook you are reading, but we all have a different interpretation of what we are experiencing. Some may think this is a great textbook, while others may look at it as a horrible ordeal. Hopefully not too many view the text this way.

When I was younger and tending bar part-time to make ends meet, many of the cocktail waitresses were single parents. To some of them it was quite an ordeal. They would come to work describing how much trouble they had attempting to get things done, while also having to deal with their child. Other waitresses arrived at work describing what a great day they had with their little “partner.” Where one waitress saw her child as a negative handicap, the other saw her relationship with her child as a positive, enjoyable experience. Both situations were virtually identical. The two waitresses had just created different realities.

Reality is not what is “real,” it’s what we think is real. It is our interpretation of an environment. When two people’s realities differ about the same subject or situation, then conflict occurs. For example, if your reality of global warming were that it is a hoax, and my reality is that global warming is real and exacerbated by humans, the clash of these two realities would trigger conflict.

11.2.1: "Paul Watzlawick on tv" (CC BY 2.0; Seniju via flickr)

Psychologist Paul Watzlawick writes,

> *“The belief that one’s own view of reality is the only reality is the most dangerous of all delusions. It becomes still more dangerous if it is coupled with the missionary zeal to enlighten the rest of the world, whether the rest of the world wishes to be enlightened or not.”* [1]

Reference

1. "Paul Watzlawick Quotes and Sayings." *Inspiring Quotes*, https://www.inspiringquotes.us/author/9864-paul-watzlawick. Accessed 19 November 2020.

11.3: The Perception Process

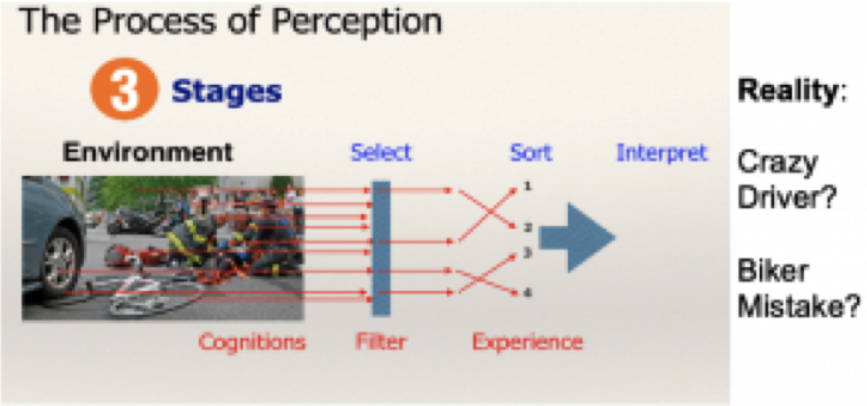
All disagreements between human beings occur as a result of differing realities generated from the same environment. The perception process is the method we use to create our reality from our environment. We all create our realities of people, events, and things in our environment internally using the three steps of perception: selecting, sorting and interpreting data from the external environment.

Perception is an individual act. There is no such thing as two people having identical life experiences; therefore, there are no two people who perceive a situation in exactly the same manner.

Each day we are bombarded by a wide variety of environmental messages. Some of the messages we pay attention to, while others simply go right past us. The perception process is the method by which we take these environmental messages, select certain ones, attach meanings to them, and finally create a picture of our environment. That picture is what we call our reality.

Although different sources explain the perception process using different numbers of stages, here we will describe three overall steps in the perception process. In this order:

- First, we select cognitions from our environment.
- Second, we sort and organize those cognitions.
- Third, we interpret our environment by attaching meaning to our cognitions.



11.3.1: "Perception Process" (CC BY 4.0; J. Marteney)

All five of our senses (sight, smell, hearing, feeling, and taste) are like windows to the world through which information passes from the environment to us. At any moment in time we are exposed to more information than we can process. Are you aware of your breathing or the temperature in the room or if you are hungry or tired? Are you even aware of the existence of your feet? Before I mentioned your feet, your concentration was on reading this book. You blocked out other cognitions from your environment. That is, you had not selected the data about your breathing, your being hungry, or your feet to enter the perception process.

Select

Select is the first stage of perceptions and acts as a filtering mechanism. When we say select, we don't mean just a conscious selection effort. Selection of cognitions is actually more of an awareness process. In the Process of Perception graphic, we come upon an accident and become flooded with cognitions. Most of the data we are exposed to is filtered out, while some is selected to pass on to our awareness. From all of the thousands of stimuli we are bombarded with at any one moment, we choose some to enter our awareness. Intense, repetitious, or changing stimuli attract our attention and shape what we notice , or select, and what we ignore.

If you have ever visited friends who live near a busy street or a railroad track, you'll notice that they aren't even aware of the noise. Their selecting filter has screened out that data, as it is now unimportant to them.

Sort

Sort is the second phase of perception, where we organize and prioritize our selected cognitions. We organize and prioritize the data so that certain cognitions stand out over other cognitions. This organization is based on our experiences which may not be

shared by others. Each of us has our own unique method of organizing.

You will organize the cognitions you receive from the accident in the graphic differently than another person might. You might be a bicyclist and focus on the cognitions from the rider. You might know someone who works for a fire station and organize your cognitions from how they are performing. We all organize cognitions differently so that certain features which stand out for one person, may not be the ones the other person placed high in his or her sorting process.

Interpret

Interpret is the third phase of the perception process. Here is where we add meaning to the organized cognitions. That is, we attach a meaning to the data that has been selected and sorted. At this point in the perception process we have an ordered collection of cognitions, which makes no sense and has no meaning. In this phase, we search our memory and assign meaning to the data based on its similarity to our previous experiences.

Another way of looking at this is that you can never really encounter an environment completely objective. You eventually attach meaning to the data, using your experiences from past situations that you have stored in your memory. Communication scholars Hans Toch and Malcolm MacLean described this process when they stated,

> *"We can never encounter a stimulus before some meaning has been assigned to it by some perceiver. Therefore, each perception is the beneficiary of all previous perceptions; in turn, each new perception leaves its mark on the common pool. A perception is thus a link between the past which gives it its meaning and the future which it helps to interpret."* [1]

This quotation begins to explain how our life experiences are drawn upon to interpret the current information that is being perceived. That interpretation, in turn, is used to explain other perceptions of a future environment. This process gives us an understanding of our environment, which we call our "reality."

Reference

1. Toch, Hans and Malcolm S. MacLean Jr. "Perception, Communication and Educational Research: A Transactional View." *Audio Visual Communication Review*, Vol. 10, No. 5, pp. 55-77. Accessed 6 November 2019.

11.4: Selecting and Sorting Filters

Why don't two people look at the same environment and "see" the same thing? The stimuli from the environment go through a selecting and sorting process allowing some to pass and others to fade away. There are a variety of "filters" that act on these cognitions.

Our **psychological condition** affects how we recognize incoming data. If we are in love, even a rainy day might look good to us. If we are depressed, no matter how nice our surroundings might be, the reality we create will be negative. It always amazes us to find that whenever we suffer from romantic problems, we hear a song which describes exactly how we feel. We may have heard that song before, but now, we seem to really hear the lyrics for the first time, because of our state of mind.

Our **physical condition** can affect what data we recognize. Physiological influences include: the senses, age, health, fatigue, hunger, and biological cycles. If we are hungry or tired, we view our environment differently than if we have eaten and have rested. You may have noticed that whenever you attempt to go on a diet, you notice nothing but food advertisements or fast food restaurants. When you're hungry again, you are more open to receive data concerning food. That's why food commercials are aired late in the evening, when people are hungry and about ready to snack. I am sometimes convinced that there is nothing but doughnut shops between my house and where I need to go.

Our **language** creates an organizational system that allows us to understand messages from our environment. Language is instrumental in the way we view, interpret and categorize the world and incoming information. The more limited our vocabulary, the more limited our reality. For example, Southern California doesn't experience much snow, so there is a limited vocabulary to describe the "white stuff." We call it snow or slush. Ski buffs may also include the term "powder." Where we have three words for it, other cultures have many more. Eskimos, for example, have eighteen different language symbols for snow. Each one is used in a different sense to describe such things as quantity, quality, and density. Our ability to experience the reality of snow compared with that of Eskimos is very limited.

11.4.1: "Left human eye" (CC0 1.0; Unknown via Peakpx.com)

> *"So much there is to see, but our morning eyes describe a different world than do our afternoon eyes and surely our wearied evening eyes can only report a weary evening world…"* [1] John Steinbeck, *Travels With Charley*

Linguist Benjamin Whorf says, "*The world is presented in a kaleidoscope of impressions which have to be organized by our minds. Meanings are not so much discovered in experience as imposed upon it, because of the tyrannical hold that linguistic form has upon our orientation in the world. If you ever want to view the world as someone else does, learn their language.*" [2]

Our **Formal learning** (K-12 and beyond) shapes how we view our environment. Much of our education is the process of shaping the socially correct view of our environment. Formal education has as its basis the obligation to teach people to be good citizens. We are taught to perceive that values such as democracy and individuality are desirable.

Our **Experiences** are our first-hand informal learning activities. Experiences tend to be layered, one on top of another. Each similar experience is added to a previous experience. Scholarship in this area suggests that first-hand experiences account for only about 5% of everything we know about our environment.

Our **Expectations** are perceptions that we expect to conform to what we already believe the actual event is. We let in those cognitions into the perception process that we expect. Expectations are influenced by: cultural differences, social roles; gender roles; occupational roles; and self-concept. Expectations we have of ourselves fall into the category of self-fulfilling prophecies. In many ways, these self-expectations dictate how we will act towards people, events and things in our environment. They are a powerful conditioning tool that affects our self-esteem and ultimately our judgment.

Reference

1. Steinbeck, John. *Travels With Charley.* London: Penguin, 1980.
2. Whorf, Benjamin and John Carroll. *Language Thought and Reality: Selected Writings of Benjamin Lee Whorf*. Cambridge: MIT Press, 1956.

11.5: Psychological Factors Influencing Our Interpretation

Closure is the mind's imperative to make sense out of its environment, even when only a limited amount of data is available. We don't like confusion. If we lack information needed to create a reality, our mind fills in the blanks or missing data. This is not a conscious activity, but more of a psychological reflex reaction. We don't voluntarily decide whether to engage in closure; rather, we are predisposed to do so. Closure allows us to understand and categorize what we are observing.

For example, a friend of yours was supposed to call you and didn't. You begin to imagine what has happened to him. To avoid being confused, you begin to create an explanation with the limited data available to you. You might decide your friend is angry with you. This adding of information is closure.

Selective perception takes place when we narrow available cognitions to make an interpretation of the environment. We look at someone who is unshaven and dirty and, based just on those two cognitions, decide he is homeless. We may have ignored a multitude of additional cognitions. In selective perception, we use only as many cognitions as we feel are necessary to make a judgment about persons, events, and things in our life.

Patterning is the attempt to keep new or current perceptions in line with past ones. New perceptions, which contradict past perceptions, cause us to be knocked off our stasis, implying to us that our reality is wrong. We want our new perceptions to reinforce our existing reality. Patterning helps us avoid the discomfort of dealing with new or conflicting information by keeping such information within the bounds of an already defined stasis. This natural process greatly hinders our ability to be a critical thinker.

World Economic Forum April 28, 2015

In research we recently published in Psychological Science, we studied German-English bilinguals and monolinguals to find out how different language patterns affected how they reacted in experiments.

We showed German-English bilinguals video clips of events with a motion in them, such as a woman walking towards a car or a man cycling towards the supermarket and then asked them to describe the scenes.

When you give a scene like that to a monolingual German speaker they will tend to describe the action but also the goal of the action. So, they would tend to say "A woman walks towards her car" or "a man cycles towards the supermarket". English monolingual speakers would simply describe those scenes as "A woman is walking" or "a man is cycling", without mentioning the goal of the action. The worldview assumed by German speakers is a holistic one – they tend to look at the event as a whole – whereas English speakers tend to zoom in on the event and focus only on the action.

How many times have you "refused to believe" something? We naturally want to be comfortable.

The conclusion of this perception process is our reality. We create our reality from the process of perception of an environment. In the graphic, our environment was the accident, but while one person's reality is "Crazy Driver" another person's reality could be, "Biker's Mistake." The reality we reach is actually an illusion we create from the environment.

The End Result: Our arguments with others stem from the differences in our realities, not what is actually in our environment. And our reality is not real, it is an illusion we create. So in essence, we do not argue what is actually there in the environment, but our illusion of the environment.

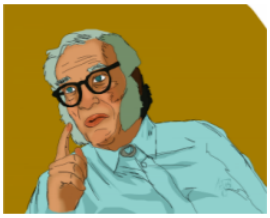
11.6: Reality Testing

Reality testing is the act of comparing realities with others in order to improve the accuracy of your reality. You have one reality about a person, place, or situation, and in reality testing you compare it with someone else's reality. The skill of reality testing provides the critical thinker with a better way to handle their interpretations of people, events, and things in their environment. Remember, the critical thinker is not dogmatic. The critical thinker is open to alternative realities in an attempt to make his or her reality more accurate.

Goal of critical thinker: To create the most accurate reality possible. Using reality testing or constructive arguing, the critical thinker can modify her original reality when confronted with a more valid argument. The opposite is the dogmatic person who argues just to maintain his reality no matter what proof is presented.

One challenge to creating an accurate reality occurs when we overly rely on assumptions and inferences. Chapter 5 of this text quotes an article by Richard Paul and Linda Edler where they suggest that we need to separate the two subconscious processes of assumptions and inferences from the interpretation of raw cognitions. They wonder how much of our creation of an accurate reality is based on what actually is there, as opposed to preconceived assumptions and then inferences.

I had a student one time who was thrilled to discover he had a learning disability. Sounds strange, but because he had not done well in school, his dad had accused him of being stupid and lazy. The dad's assumption was that students who do not do well in school are stupid and lazy, so he inferred that his son was stupid and lazy. Now this student had a more accurate reality. A reality he could use to improve himself.



11.6.1: "Asimov" (CC BY 4.0; Zakeena via SketchPort)

> *"Assumptions are your windows to the world. Scrub them off every once in a while, or the light won't come in." Isaac Asimov* [1]

We need to realize that our perception does not necessarily represent the one and only reality of the topic under discussion. Serious problems can arise when people treat interpretations as if they were matters of fact. The dogmatic person avoids reality testing. The dogmatic person does not want to experience the discomfort of having his reality challenged. But as Richard Weaver writes in his book, Understanding Interpersonal Communication,

> *"Understanding this is a big step toward more effective communication. It will help us become more sensitive to reactions, to experiences, both our own and others', as personal interpretations of events."* [2] *(Weaver, 1984)*

Through communication, we can begin to narrow perceptional gaps that divide us, and maybe settle on a similar reality that makes these gaps livable. One goal of the argumentative process is to narrow the differences in perceptions between individuals. The narrowing of that gap can be accomplished by reality testing using the following steps.

Sharing and comparing our realities with those of others can help reduce distortions and differences among the many realities you have created. By being willing to share our perceptions with others we get to see if our perceptions are reasonable. The bottom line is that no two realities are identical.

Our interpretations of the environment are just that, interpretations. Things mean no more or less than what we want them to mean. Thus, meaning assigned to people, events, and things in the world will differ from person to person. Given the almost unavoidable tendency to form first impressions, the best advice for a critical thinker is to keep an open mind and be willing to alter your impressions as events prove those impressions to be mistaken. Only by sharing and comparing our meanings with others' meanings, can we hope to discover how valid or reasonable our meanings are.

By examining a variety of realities, we may discover a more accurate reality, which might better approximate the extent to which our perceptions correspond to the environment we are trying to describe. In this way, we should find out if our realities about people, events, and things in our environment really are important or unimportant, significant or insignificant, and thus allow us to put our many perceptions into perspective.

If your realities cannot be validated by others, you need to go back and reevaluate the data you used to create the reality in the first place. This process will only work if your perceptions are shared with a random cross-section of people. If you select only those whom you know will validate your interpretation, the process will be meaningless. Just imagine the support you would get for your ideas from your Facebook "*friends*." They would probably not be very critical.

You want to buy a certain car. You go to the dealer and talk with a salesperson about that car. When you get home, a friend presents contrary data to you about the car you have selected. Going back to the dealer and salesperson to validate your original interpretation will be meaningless, because he or she has a vested interest in validating your views so that you will purchase the car. Going to sources like Car and Driver, Consumers Digest, and Consumers Report, or talking with other people who own or know about the car, would create a more valid reality test. As author B.P. Allport wrote,

> *"Individual perceptiveness and sensitivity are limited by the personal perspective, for a person tends to see things which fit the world as he or she sees it. The process of perception leads a person to see what he or she expects to see, to interpret events in familiar terms, and to reconstruct events as one thinks they must have been."* [3]

Reference

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11.7: Stasis

11.7.1: "Water and oil" (CC BY-SA 4.0; Victor Blacus via Wikimedia Commons)

Stasis means "*at rest*." Think of when oil and water mix. After a while the oil and water settle and there is a layer of oil and a layer of water. The combination is at rest. You mix it up but it returns to its stasis position where the oil and water separate.

Like the oil and water, people like to find their stasis, or comfortable "*at rest*" position. Once we have found a personal stasis, we desire to maintain it. Think about your habits for a moment. From where you like to park your car for school or work, the pattern you follow when you get up in the morning, where you like to sit in a movie theater and so on. We strive for comfort so we find habits and keep them as they provide us with a degree of comfort.

Reality testing can take seconds, minutes, hours, days, weeks, months, or years to do. We create a reality that makes us comfortable. That reality becomes our stasis on the subject. Stasis is the absence of change in one or more of our realities for some extended period of time. Stasis refers to the existing state of things; leaving things as they are without modification or alteration.

Because we naturally want to maintain our stasis of an environment, a strong bias occurs in the perception process. We use the perception process to interpret the environment in such a way as to maintain our stasis, even if it is an incorrect interpretation. As we take in more information about ourselves and life around us, we do our best to view things as conforming to our reality which allows us to maintain our stasis. Non-critical thinkers would rather be comfortably wrong, than uncomfortably correct. And a perception process that naturally strives to maintain our stasis, helps us stay in our comfort zone.

One of my favorite definitions of a critical thinker is someone who is willing to challenge his or her deepest held beliefs. Thus, the critical thinker is not afraid of being uncomfortable as he challenges his stasis. The critical thinker would rather be uncomfortably right than comfortably wrong.

Let us imagine in the 2016 Presidential election you supported Hillary Clinton. This would be your stasis. You heard a news story where more emails were found on her server that could have contained secret information. As a Clinton supporter, you would have been more likely to excuse those emails as being careless and not change your stasis on Secretary of State Clinton. That would be more comfortable than thinking that Clinton actually broke the law.

Stasis is a person's personal comfort zone. You may have had a relationship with someone, or you may be having this relationship now, that is just continuing because you have been together for a long time. In the back of your mind you have this feeling that it is over, but you continue it anyway. The "stasis" of this relationship is so powerful that as long as you have no significant reason to change, you just hang on.

You may actually look for things to get angry about with the other person that eventually leads to the big argument and eventual breakup. Later you look back and think, "I should have broken up earlier. I was in the relationship too long." Why didn't you just break up and start fresh? You didn't because that would be a serious change in our stasis. So, we end up staying with someone longer than we should.

We all strive for a comfortable feeling, physical and/or emotional contentment. We want to be in a spot where we can feel at ease. Stasis is that spot. While experiencing stasis, we feel physically and emotionally content. Once we are on stasis, we strive to stay there. As Communication Theorist Paul Watzlawick again looks at the realities we not only create, but also fight to keep them from changing. In this quote he argues that "We use the perception process to 'shore-up' our reality."

> *"Our everyday, traditional ideas of reality are delusions which we spend substantial parts of our daily lives shoring up, even at the considerable risk of trying to force facts to fit our definition of reality instead of vice versa. And the most dangerous delusion of all is that there is only one reality. What there are, in fact, are many different versions of reality, some of which are contradictory, but all of which are the results of communication and not reflections of eternal, objective truths."* [1]-- Paul Watzlawick

Stasis does not mean just feeling good or happy. Stasis means feeling comfortable. People can have a positive or negative outlook concerning the world around them. So, a person can actually feel comfortable being miserable.

Negative people generally have a depressed view of their environment. That depressed view is their stasis. When something good happens to them, it actually makes them uncomfortable. I had a student like this once who won a car at a supermarket give away. Instead of being excited about winning the car, she complained that now she had to pay taxes on it. Having a downside to winning a car allowed her to maintain her negative stasis.

Upbeat people tend to view their environment optimistically. Bad things happening to them make them uncomfortable, so they will look for the "good" side of the experience. I recently had to spend six days in the hospital. To keep the experience in line with my generally positive stasis, I remember the nutritional information I received, which is helping me eat healthier and I could see a benefit from my hospital stay. We attempt to perceive the world in a manner which conforms to our stasis, because being knocked off our stasis makes us uncomfortable.

Remember when you finally broke up with that special someone? Originally your stasis was to think of that person as someone special and important. You only saw those things which reinforced that stasis. Now you begin to perceive that person without the necessity of confirming your stasis. You begin to notice other aspects of his or her personality. All of a sudden you notice faults that you hadn't noticed before. Suddenly you wonder, "What was I thinking when I was going with that person?"

Our realities of people, events and things in our environment are individually created by the same selection, sorting, and interpreting process as others use to also uniquely create their perceptions of people, events, and things in their environment.

As humans, we are motivated to try, both psychologically and physiologically, to keep our perceptions consistent. We strive to maintain this consistency in thought and action. We will then do the best we can to defend our reality as being the most accurate as compared to someone else's. To the extent that individual perceptions about the environment differ, we will have difficulty in reaching a common understanding of what is happening in the environment.

Professors of Communication, James McCroskey and Lawrence Wheeless write,

> *"We perceive or misperceive according to learned habits of recognizing and interpreting the nature of stimulus against some background or setting." This makes it more difficult and demanding to establish communication with each other. Only when we understand that there may be more than one valid reality of the environment, can we begin to realize the importance of communicating with others.*[2]

One theory of communication claims that we only communicate to stay on stasis. While comfortably watching a movie on television, we become thirsty. We are no longer feeling physically content. Our thirst has knocked us off our stasis. We ask someone in the kitchen to please bring us something to drink. Once we have something to drink, we are again comfortable and back in our stasis.

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11.8: The Focus of This Chapter

In this chapter I wanted you to better understand the persuasion process and how that process establishes what we argue. There were several key points:

- The perception process is the method we use to attempt to understand our environment. We use that process to create a personal, internal reality from an external environment.
- The perception process is flawed and includes personal biases. This leads to the creation of an internal reality that may be very different from the environment. That is why no two people see an environment in the exact same way.
- When we argue, we argue our realities and not the actual eternal environment. We are arguing what is inside our head with what is inside the head of another person. We argue illusions we have of the environment.
- To crate the most accurate reality as possible, we argue our realities with those of others. This is called reality testing.
- Humans strive for stasis. Our tendency is then to defend our reality instead of being swayed by the realities of others.
- As a critical thinker, we need to be more open-minded and can change our "reality" when a more accurate one is presented to us.

CHAPTER OVERVIEW

12: The Foundations of Critical Thinking

12.1: Just How “Smart” are You

Imagine that now you have to face one of the most challenging, important, difficult decisions of your life. No, I’m not talking about the decision of getting married. I’m talking about what phone service to sign up with. Picking the right smart phone was challenging enough, now you need to decide on a service plan. Is the actual connectivity and service the important aspect or is it the data plan? Do you want the phone service to be consistent with your television service, which is a challenging decision in and of itself? Your emotional self may be telling you one thing, while your intellectual self is telling you another. What should you do?

In an earlier chapter, we looked at the decision-making process. In this chapter we will examine the internal workings of critical thinking and how we create arguments and make decisions based on these arguments. Critical thinking is reasonable thinking that is focused on deciding what to believe and how to act. Now that we have examined argumentation and critical thinking, we can put everything together and determine just what it means to be “smart.”

To do this we need to understand the relationship between intelligence, thinking and knowledge.

12.2: Defining Intelligence

How intelligent do you need to be to be a good critical thinker, arguer, and decision maker? Many definitions of intelligence exist and there are as many different theories about what intelligence is and how it is measured.

David Wechsler, the creator of a number of intelligence tests, considers intelligence to be the capacity to understand one's world and the resourcefulness to cope with its challenges. Intelligence is not only how much one knows about their environment, but also how effectively one uses that information.

Psychologists Sternberg, Conway, Kerton and Bernstein researched what the American people thought being intelligent meant.[1] They concluded that "you" felt intelligence consisted of the following three sets of abilities:

Problem solving and practical skills include being able to reason logically, to identify connections among ideas, to see all aspects of a problem, to take an interest in world problems, and to keep an open mind.

Verbal ability includes speaking clearly and articulately, conversing well, being knowledgeable about subjects of importance on a global level, studying hard, reading widely, and having a good vocabulary.

Social competence is being able to accept others for what they are, admitting mistakes, having a social conscience, and being sensitive to other people's needs and desires.

The late child psychologist Jean Piaget believed that intelligence was a form of adaptation. As children grow up they construct their knowledge of the world around them through the use of assimilation and accommodation. Piaget theorized that as children interact with both their physical and social environments, they organize new information into groups of interrelated ideas that he called **schemes.** In situations where children come into contact with something new, they must either assimilate it into an existing scheme or create a new scheme. The more proficient they are at doing this, the more intelligent they would be displaying.[2]

Adaption is both physical and symbolic. The physical relates to your actual psychomotor skills that allow you to adapt to different environments. Environment can mean anything from family, to school, to work, to social, to recreational settings. Each of these environments requires that certain roles be played for you to meet the requirements and expectations of that particular environment.

Physical intelligence involves the use of your motor skills in adapting to varying situations. Babies are born with virtually no physical intelligence. They cannot survive without the assistance of those who are more physically capable. Physical intelligence develops with the growth process.

As a child gets older the structure, conventions, traditions, and demands of the family create new and more complex expectations for the child. By age one the child might be expected to walk, by age two to talk, and by age three to be toilet trained. By the time the child reaches his or her teen years the expectations have become much more demanding. The child is to perform well in school, be involved in some constructive outside activity, help with necessary functions around the home, and obey established rules of behavior. What child hasn't heard the line "This is my house and as long as you live here you will obey my rules?"

Many parents become frustrated from wondering why their child can't follow what they consider simple rules of conduct? As the child gets older and understands more, he or she is expected to be able to readily adapt to the changing family environment. Yet, thousands of children run away from homes across the United States. High school dropouts, people who consistently quit their jobs or can't hold a job, and many marriages that end in divorce, could all qualify as examples of the inability to cope with differing environments. In many of these situations, a lack of physical intelligence is being displayed.

Symbolic adaption is your ability to communicate within an environment, so that you can make your needs, wants, and desires known to others. Given their ability to cry, babies are born with a limited amount of symbolic intelligence. New parents soon learn to recognize the difference between a baby crying for food, to be changed, or just to be held. As one grows, the level of symbolic sophistication increases. Language is added to enable a person to express himself or herself to others using a variety of word choices. One aspect of language is the process of selecting available symbols to match specific thoughts.

As children learn to speak they begin to acquire different symbols. A small child might refer to all four-legged animals as a "doggie," because that is the only word he or she has learned as a symbol for animals. It is expected that a 3 or 4-year-old child will be able to distinguish between dogs, cats, cows, horses, etc. As an adult, one can be expected to know specific breeds of those animals.

The process of communication is essentially the symbolic interaction between sender and receiver. Poorly chosen symbols have sent many a person scrambling to clarify what they feel is misinterpreted communication. All of us have used language we later

wish we hadn't. These are the times when we have demonstrated a lack of symbolic intelligence. Critical thinkers try to remember the old cliché, "Think before you speak."

Howard Gardner of Harvard has proposed a theory of **multiple intelligences.**[3]

In this approach, Dr. Gardner states that there is not one overall intelligence measurement that describes a person. Instead, there are different types of intelligence and a person may be good at one or more, but not others. The line that is used when talking of this approach is that "It is not how intelligent you are, it is how you are intelligent." Dr. Gardner argues that there are eight different kinds of intelligence:

- **Linguistic** intelligence or verbal communication.
- **Logical mathematical** intelligence is the ability to solve mathematical problems.
- **Spatial** intelligence is the ability to perceive the world accurately.
- **Musical** intelligence is the ability to perceive and create musical information.
- **Body-kinesthetic** intelligence is the control of body motion and ability to handle objects.
- **Intrapersonal** intelligence is the ability to know one's own feelings.
- **Interpersonal** intelligence is the ability to understand others' feelings and motives, and to communicate that understanding.
- **Naturalist** intelligence is the ability to understand the natural world, which involves describing and categorizing the characteristics of plants and animals.

Gardner argues that each kind of intelligence is independent of each other and that a person could do poorly on one or more of the intelligences, but excel in another. Gardner says,

> *"People studying physics, or chemistry or biology or geology in high school, I would say it doesn't make the slightest bit of difference. They should study some topics, of course, but the choice is wide open—I'm interested in depth, not breadth. I'm not talking about college education; I'm just taking on K to 12. What I want when kids get through a K to 12 education is for them to have a sense of what their society thinks is true, beautiful and good; false, ugly and evil; how to think about it and how to act on the basis of your thoughts."* [4]

Yale University psychologist, Robert S. Sternberg, also argues that we don't possess just one type of intelligence. He states that we possess three types of intelligence known as the **Triarchic Theory of Intelligence**. He argues that there are three facets that make up what we call intelligence.[5]

Analytical Intelligence, which is internal knowledge of the type learned in formal education and displayed in the ability of the human to critically think and problem solve.

Creative Intelligence involves insight, synthesis, and the ability to react to novel stimuli and situations. This type reflects how an individual connects the internal world to external reality.

Practical Intelligence involves the ability to grasp, understand, and solve real life problems in the everyday jungle of life. This reflects how the individual relates to the external world about him. In short, practical intelligence is **street smarts**.

12.2.1: "hand holding intelligence card" by Nick Youngson is licensed under CC BY 3.0

Sternberg writes,

> *"The basis for our instruction is my own 'balance theory' of wisdom: People are wise to the extent that they use their intelligence to seek a common good. They do so by balancing, in their courses of action, their own interests with those of others and those of larger entities, like their school, their community, their country, even God. And they balance these interests over the long and the short terms. They adapt to existing environments, or shape those environments, or select new environments to achieve ends that include, but go well beyond, their own self-interest."* [6]*(Sternberg, 2009)*

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6. Robert Sternberg, Beyond IQ: A Triarchic Theory of Human Intelligence (Cambridge: Cambridge University Press, 2009)

12.3: Measuring Intelligence

People are surprisingly similar to each other. We all eat, drink, think deep thoughts, plan excursions, and seek our goals. Yet, within these broad similarities are differences, uniqueness among individuals. Some are taller than others. Some are more artistic than others while others appreciate the outdoors more than others. Some even appear to be more intelligent than others. Psychologists have long been intrigued by individual differences, and they have developed an array of tests to try to measure these differences. When they focus their attention on the way people differ in their ability to think, reason, and remember, they raise questions about intelligence. How is intelligence measured? Measuring intelligence generally can be broken into tests of intelligence, and tests of aptitude and/or achievement.

The **Stanford-Binet test** is the most influential and traditional way of intelligence testing. It was developed in France by Alfred Binet and his collaborator, Theodore Simon. Binet's tests of intelligence measure skills such as judgment, comprehension, and reasoning--the same kinds of skills measured on most intelligence tests today. The Stanford-Binet test traditionally yields an overall score referred to as an intelligence quotient, or IQ. The term IQ, generally describes a score on a test that rates the subject's cognitive ability as compared to the general population. IQ tests use a standardized scale with 100 as the median score and a score between 90 and 110, indicating average intelligence. A score above 130 indicates exceptional intelligence and a score below 70 may indicate an intellectual disability. Like their predecessors, modern tests do take in to account the age of a child when determining an IQ score. Children are graded relative to the population at their developmental level.

Aptitude tests are designed to predict what a person can accomplish in the future. An example is the general aptitude test battery, SAT-Scholastic Assessment Test, and ACT American College Test. They measure verbal and mathematical abilities. The idea is the knowledge gained in high school and the abilities associated are a predictor of how well a person will do. Achievement tests measure what a person can do at the time the test is given. Intelligence tests are usually aptitude tests designed to measure a broad range of mental capabilities. School grades are also considered a measure of knowledge gained in the formal education environment.

David Wechsler developed The Wechsler Intelligence Scale in 1939. His reason was the need to have a test to measure adult intelligence. Wechsler tests measure intelligence in adults 16-89, children age 6-16, and preschool and primary grades age 3-7 years of age. The Wechsler Scale is used to measure and help determine cognitive disorders. Often it is given to an adult who has suffered brain trauma, to determine what areas that may be affected, or certain childhood disorders, such as dyslexia. The test has 14 parts that measure verbal skills and performance skills.[1]

The **Sternberg Multidimensional Abilities Test** measures all three of the types of intelligence he defined in his model. How do his test items differ from those on a conventional test? For one, there is more emphasis on ability to learn than on what has been learned. For example, verbal skill is measured by learning from context, not by vocabulary. For another, the test measures skills for coping with novelty, whereby the examinee must imagine a hypothetical state of the world, such as cats being magnetic, and then reason as though this state of the world were true. For yet another, the test measures practical abilities, such as reasoning about advertisements and political slogans, not just about abstract words or geometric forms.

Sternberg's test measures provide more information than just the analytical intelligence measured by standard IQ tests on which, in Sternberg's view, our society has placed far too much emphasis. Sternberg says, "*If we want to measure intelligence, we can and should measure it broadly rather than in the narrow ways that have failed to give a true picture of human capacities.*"[2]

Reference

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12.4: Emotional Intelligence

When we imagine being a skilled critical thinker we have a tendency to focus on a person's IQ and how we logically approach arguments. But there is another aspect of intelligence that we call Emotional Intelligence that needs to be understood if we are to better understand how we make quality decisions.

12.4.1: "Heart in Head" by Roy Blumenthal is licensed under CC BY-SA 2.0

We are constantly exposed to a vast amount of emotional information about our world and ourselves. For years men have been told to hide their emotions and keep them to themselves, while women have been criticized that they are too emotional. In both cases, we have ignored the power of our emotions to help us be a success. The key is for us to use that information about the world and ourselves to be more effective. Recently, more and more companies are realizing the importance of a high EQ workforce and are bringing EQ into the workplace.

The phrase **emotional intelligenc**e was coined by Yale psychologist Peter Salovey and the University of New Hampshire's John Mayer to describe qualities like understanding one's own feelings, empathy for the feelings of others and "*the regulation of emotion in a way that enhances living*." His goal is to redefine what it means to be smart. His thesis: when it comes to predicting people's success, brainpower as measured by IQ and standardized achievement tests may actually matter less than the qualities of mind once thought of as **character** before the word began to sound quaint.

The following two definitions should help you better understand Emotional Intelligence.

> *"Emotional Intelligence is the ability that helps the individual to sense, understand, and effectively apply the power and acumen of emotions as a source of human energy, information, connection, and influence."*
>
> --Robert K. Cooper and Ayman Sawaf,[1] *Executive EQ*
>
> *"Emotional Intelligence is the intelligent use of emotions: You intentionally make your emotions work for you by using them to help guide your behavior and thinking in ways that enhance your results*."
>
> --Hendrie Weisinger[2], *Emotional Intelligence at Work*

Emotional Intelligence is nothing new.

> *"Anyone can become angry—that's easy. But to be angry with the right person, to the right degree, at the right time, for the right purpose, and in the right way—that is not easy."* Aristotle, The Nicomachean Ethics

EQ is not the opposite of IQ. Some people are blessed with a lot of both, some with little of either. What researchers have been trying to understand is how they complement each other; how one's ability to handle stress, for instance, affects the ability to concentrate and put intelligence to use. Perhaps the most visible emotional skills, the ones we recognize most readily, are the "*people skills*" like empathy, graciousness, and the ability to read a social situation.

Navy SEALs Use of Emotional Intelligence

12.4.2: "SEALs Logo" by Unkown is licensed under CC BY 2.0

In order for more of the candidates to pass the rigid requirements to become a SEAL the Navy implemented Emotional Intelligence training. A four-step process was taught to the candidates to help them stay in control of their emotions. As a result, the pass rate went from a quarter of the candidates to a third.

Goal Setting: Set small, short-term goals that work towards my larger goal. If my goal is to lose 30 pounds, then what am I going to do this week to lose 1 pound. Make that my goal.

Rehearsal: Go over in your mind the nervous situation you are going to be experiencing, be it a job interview or a speech you have to give. Then when you do the challenge, it will be for the second time.

Self-Talk: Tell yourself you can do it. Don't let negative thoughts disrupt your confidence. This self-talk will keep you on track to success

Arousal Control: Taking a deep breath will help you reduce the anxiety you might have in a given situation. A "cleansing breath" is a deep intake of air through the nose, hold it for a moment and then a long, slow exhale through the mouth.

Reference

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2. Hendrie Weisinger, *Emotional Intelligence at Work* (San Fransisco: John Wiley and Sons, 1998)

12.5: Knowledge and Literacy

Another area of our intellectual capability is literacy. Not only is knowledge the acquisition and storage of factual information, but it also includes literacy. Literacy has traditionally been thought of as the ability to read and write. However, in a society as technologically advanced as ours, this minimum ability hardly qualifies someone to be labeled as literate. Our complex, technological society requires one to be literate in a number of areas.

Functional Literacy: This is the ability to operate within the demands of our environment. Functional literacy means that we can balance a checkbook, fill out a job application, prepare an income tax form, figure a home budget, and relate to others. It is the source of information over which we have the most control.

Media Literacy: This is the ability to manage what we watch, read, and listen to. The media has become an important part of our daily lives. Media literacy is the ability to apply critical thinking skills to the media.

> *"Media literacy is the ability to sift through and analyze the messages that inform, entertain and sell to us every day. It's the ability to bring critical thinking skills to bear on all media— from music videos and Web environments to product placement in films and virtual displays on NHL hockey boards. It's about asking pertinent questions about what's there, and noticing what's not there. And it's the instinct to question what lies behind media productions— the motives, the money, the values and the ownership— and to be aware of how these factors influence content."*
>
> --**Jane Tallim,** contributor for Media Smarts[1]

Statistics from the Neilson television ratings service indicate that the average American watches over six hours of television per day. It is hard to imagine that our view of people, events, and things in our life is not be affected by what is viewed on television. Consider the millions of people who understand the world only from reading Facebook. As the influence of the media increases, so will the need to manage the media.

The Center for Media Literacy has many experts who suggest a variety of questions that we can ask as we watch different messages on the variety of medias that are available. In no particular order, here are some of the questions you might want to consider.

- Who the media was intended for?
- Who wants to reach this audience? And why?
- Whose perspective is this story told?
- Whose voices are heard and whose voices are absent?
- What strategies does this message use to get my attention and make me feel included?
- Who profits from this presentation and who loses?
- Who created this message?
- What techniques are used to attract my attention?
- How might different people understand this message differently from me?
- What lifestyles, values, and points of view are represented in or omitted from this message?
- Why was this message sent?

More than you thought?

Here is a great test for you, find a story that is in the news. Then go search a variety of news outlets from television to radio, to websites, to blogs, and see how the story is different. Ask some of the above questions. Notice the differences you find in the stories and the way they are presented. Often it is not what is there that is different, it is what they leave out that makes the stories so different.

Information/Reference Literacy: This refers to understanding data of all types, from a textbook on critical thinking to a business spreadsheet to e-information from the internet. As the amount of information continues to grow, doubling every four years, people are expected to know more about almost everything. Consider the explosion of information available through the Internet with millions of web pages. From entertainment, to bill paying to research, access to the Internet has become more and more of a necessity. A poll conducted by the BBC in early 2010 found that almost four in five internet users and non-users around the world felt that access to the Internet was a fundamental human right. And in several countries including Finland, Greece, Spain, Estonia, and France, it has actually become a protected human right. On July 6, 2012, the United Nations Human Rights Council backed the notion that Internet access and online freedom of expression is a basic human right.

But as an unfiltered medium, people are individually responsible for knowing what specific electronic information and what web sites are reliable and trustworthy. Many college libraries offer online courses that can improve our Information Literacy.

Cultural Literacy: This type of literacy encompasses history, philosophy, and the arts, any expression that represents an attempt to understand and come to terms with our civilization. Although it is correct that no two humans know exactly the same things, they often have a great deal of knowledge in common. To a large extent this common knowledge or collective memory allows people to communicate, to work together, and to live together. It forms the basis for communities, and if enough people share it, it is a distinguishing characteristic of a national culture. The form and content of this common knowledge constitute one of the elements that make each national culture unique

Cultural literacy, unlike expert knowledge, is meant to be shared by everyone. It is that shifting body of information that our culture has found useful, and therefore worth preserving. Only a small fraction of what we read and hear gains a secure place on the memory shelves of the culturally literate, but the importance of this information is beyond question. This shared information is the foundation of our public discourse. It allows us to comprehend our daily newspapers and news reports, to understand our peers and leaders, and even to share our jokes. Cultural literacy is the context of what we say and read.

Cultural literacy has its roots in what cognitive scientists call “schema theory.” Schema theory describes how people organize all of the amount of background knowledge which they accumulate about the world. This theory asserts that knowledge is organized into mental units called **schemas**. When people learn, when they build knowledge, they are either creating new schemas, or linking together preexisting schemas in new ways. In teaching we call this constructionist learning where students take what is being taught in class and actually construct new knowledge.

Everybody has different experiences, so everyone develops a somewhat different view of the world. However, we also share many common experiences. Most Americans have seen a baseball game, gone to a movie, and have eaten at McDonald’s. Shared schemas constitute an important part of our shared cultural knowledge. When people communicate, they depend on these shared schemas. Conan O’Brien can’t make a joke about sushi unless he can reasonably assume that most of his audience has had the experience of eating sushi. The more background knowledge two people share, the less they have to make explicit in their conversations.

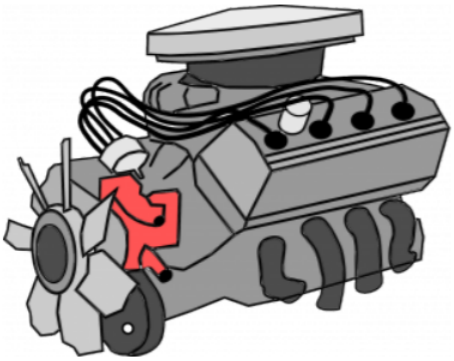
Reference

1. http://mediasmarts.ca/

12.6: Thinking vs. Intelligence

Now we can look at the relationship between Intelligence, knowledge, and finally thinking. There is a difference between intelligence and actual thinking. Too often more credit is given to the person who is “highly intelligent” than the person who effectively uses that intelligence to critically think, argue, and arrive at a decision.

Intelligence may describe our cognitive potential, but thinking examines how we actually use that potential. Brain training pioneer, Edward de Bono, explains our mental capacity by comparing it with the engine of an automobile. He compares the horsepower of an engine with intelligence, fuel with knowledge, and how well-tuned an engine is with one’s thinking ability. Just like having a high horse-powered engine that does not go anywhere because it is poorly tuned, so could a person be highly intelligent and still make poor decisions, because he or she does not have good thinking skills.



12.6.1: "Automobile engine" by Unkown on Pixabay

Horsepower --- Intelligence

Fuel --- Knowledge

Tuned --- Thinking

Smart = Effectively using thinking Skills to utilize your Knowledge and Intelligence.

Another way of looking at the interaction between intelligence, knowledge, and thinking is to compare them with the working of a computer. Intelligence can be related to the computer processer and memory storage. Knowledge is the data that is imputed into the computer. Thinking is the program that is written to utilize the capabilities of the computer in processing the information. No matter how impressive the computer processer is, without a quality program it is little more than a doorstop.

If a person has a level of cognitive ability, access to quality information, and effective thinking skills, then we can say that person is **smart**. Since thinking is necessary to best utilize a person’s intelligence, we need to more closely examine the skill of thinking.

12.7: Patterns of Thinking

Instead of one thought process, we can take advantage of five different patterns of thinking.

Emotional Thinking Process occurs when you make a decision based on sympathy, passion, or prejudice. This pattern of thinking stresses the heart over the mind and is dominated by one's emotions. The motto of these people is, "If it feels good, do it." In this pattern of thinking, decisions are arrived at using emotional criteria.

The **Logical Thinking Process** happens when you make decisions because the facts of the situation dictate or justify the decision you are using. This pattern of thinking attempts to ignore emotional considerations in favor of one's ability to use reason. This stresses that humans dominate other species because of their ability to reason, and, therefore, decisions should be made first on logical criteria.

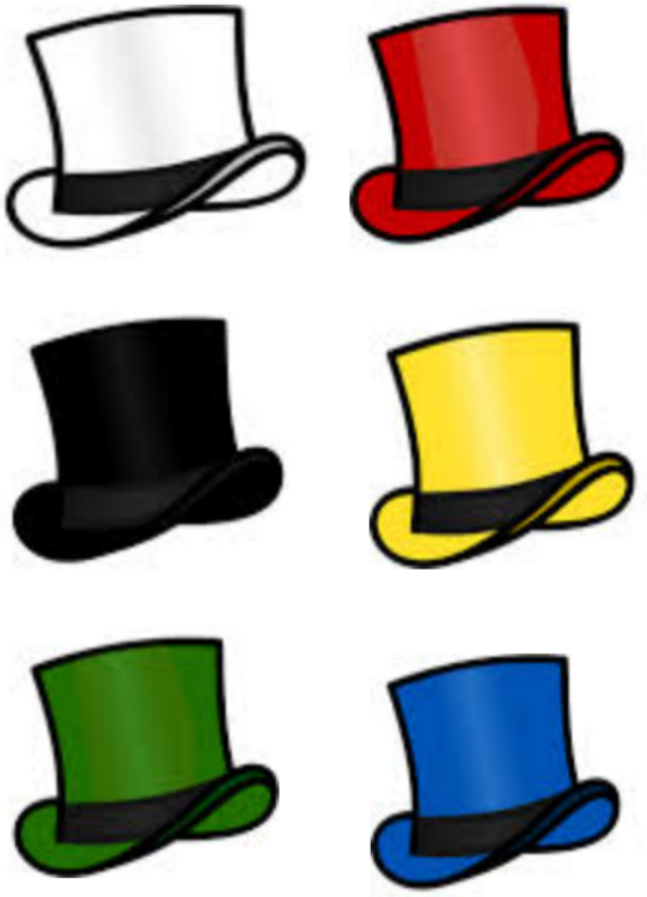
The **Vertical Thinking Process** uses a step-by-step procedure to make decisions. You cannot go to step two until you have first completed step one, and step three is dependent on steps one and two. The vertical thinker, also known as a linear thinker, is dependent on clearly written and organized instructions to get a task accomplished. This is the way recipes are followed or the method computers think. If an instruction is missed or an error is made, work on the task comes to a halt until the error is corrected. This pattern stresses conventional, rather than unique or creative outcomes.

The **Horizontal Thinking Process** is more creative, unconventional, highly innovative, using "off the wall" ideas. Popularized by Edward de Bono, this type of thinking, or processing of information, stresses creativity. Decisions are based on one's ability to select from a wide variety of choices developed from many angles and approaches to the situation.

12.7.1: "Thinking Brain Machine" by Aukipa is in the Public Domain, CC0

12.8: Edward de Bono's Six Hats of Thinking

As described earlier, there is no one thinking method. When we are working on a problem we may have been told to put on "our thinking cap." One of the most popular approaches to alternative modes of thinking is described by Edward de Bono as the **Six Hats of Thinking**[1] This approach says there are six different ways we can think about a problem. Each way is illustrated by a different colored hat.



12.8.1: "Six Thinking Hats" by Unkown is in the Public Domain, CC0

1. White Hat: This is the hat you wear when you are neutral and are just thinking of facts and data.

2. Red Hat: This is the hat you wear when you are using your feelings, intuition, hunches, and emotions.

3. Black Hat: This is the hat you wear when you judge, evaluate, and use caution.

4. Yellow Hat: This is the hat of optimism. Wearing this hat, you look for ways that something can be done.

5. Green Hat: This is the hat you wear when you want to be creative and come up with new ideas.

6. Blue Hat: This is the hat you wear to see an overview of the problem. This hat suggests where your thinking should go next.

Now when someone tells you to "put on your thinking cap," an old expression meaning it is time to stop and think, you now know you have six different caps you can wear.

Reference

1. Edward de Bono, Six Hats of Thinking (New York City: Little, Brown, and Company, 1985)

12.9: The Critical Thinking Process

In the critical thinking process, many factors are taken into consideration before a decision is made. Critical thinking involves using logical, emotional, and ethical criteria as one strives to make up his or her mind. Decisions are reached only after a careful examination of all available data, and are made as a result of considering all of the alternatives and their various consequences.

Can critical thinking be taught? From the work of Dr. Edward de Bono and others like Richard Paul the answer appears to be yes.

Professor of Social Ecology, Peter Scharf, is concerned about the lack of a school curriculum that teaches thinking. Scharf says,

> *"To be a professional of any kind in the next 20 years, or even an enlightened citizen, will require a complicated set of thinking skills, more than reading and writing. The world isn't as filtered as it once was. Kids are thinking. What we're trying to do is have them do it well."*

No one approach is the best, and no one approach works well all of the time. Different presidents have been different types of thinkers. In 1962, when President Kennedy was faced with Soviet missiles in Cuba, he brought together all of his personal advisors, cabinet members, and military personnel to advise him on what course of action ought to be taken by the United States. Kennedy solicited suggestions from numerous advisors who advocated many different positions, from doing nothing to eliminating the missiles with a nuclear strike.

Patterson and Zarefsky write in their book, CONTEMPORARY DEBATE,

> *"President Kennedy recognized the invaluable benefits derived from a clash of ideas in reaching a decision. Faced with the Cuban missile crisis, Kennedy rejected the decision- making methods of chance, impulse, or authoritarian action. Instead, he insisted in a high- level debate among experts before making a final decision about the action to take."* [1]

The term we use for examining our thinking is metacognition or the metacognitive process, which simply means "thinking about our thinking." By stepping back and looking at our level of intellectual and emotional intelligence and seeing how we think, we can improve our thinking.

The good news is that we can become smarter and smarter. We can improve our critical thinking ability and our argumentative skills. This allows us to be in better control of our lives.

Reference

1. J. W. Patterson, and David Zarefsky. *Contemporary Debate*

12.10: The Focus of This Chapter

In this chapter I wanted to look at intelligence, thinking, literacy and how these interact with each other to make us “smart.”

- There is a difference between thinking and intelligence. Intelligence seems to be based on how our brains are “wired.” Different kinds of intelligence suggest there are different types of “wiring.”
- Thinking is the skill in how we use our intellectual “wiring.” Since thinking is a skill, we all can improve our ability at critical thinking. No matter what our initial intelligence suggests, we can improve our critical thinking.
- Being “smart’ is not just a high intelligent score. Being “smart” occurs when you effectively combine your intelligence with your knowledge and guide them with your thinking skills.

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