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## 2 | Thinking About Bias

In this chapter, we are going to take a look at *bias*, that great black hole that negates logic and every other tool of critical thought, a dark force with the potential to lead each and every one of us to our doom.

But before going there, here's one of my favorite jokes:

*This guy walks into a bar and does something.*

*Then, a second guy walks into the bar and does the same thing as the first guy.*

*But then this third guy walks into the same bar and does something different than the first two.*

This is one of everyone's favorite jokes. So what makes it so funny?

Ok, maybe this version of the joke isn't that funny. But you've heard endless variations on this joke before involving lawyers or rabbis or penguins walking into bars or donut shops or psychiatrist offices. For some reason it makes us laugh when a joke begins by creating a pattern, such as two people doing the same thing in the same place, and then surprises us by breaking that pattern in an unexpected way.

This sequence of creating a pattern just to break it seems to amuse everyone, regardless of their culture, which indicates it has something to do with our internal human wiring. To understand why, we need to talk a little bit about how our brains work.

Before I start talking about the brain, you need to keep in mind that cognitive science—the study of the mind—is a new and rapidly changing field. This means some of the ideas introduced in this chapter are controversial today and might be completely replaced by better theories during your lifetime.

Still, some contemporary thinking about how the brain processes information turns out to be extremely descriptive, even predictive, especially with regard to the mind's tendency towards bias. So let's take a look at what we *think* the brain does when it turns information coming from our five senses—sight, hearing, taste, smell, and touch—into memory and beliefs.

To begin with, from the time of the ancient Greeks through the twentieth century, human beings were generally assumed to be rational creatures. This makes sense if you're looking at what makes people distinct from other sorts of animals, which is clearly our ability to reason.

Now this doesn't mean that people act reasonably and logically all the time. But whenever we act in a way that defies reason, this has generally been attributed to emotion or instinct—things we still have in common with lower animals—overwhelming our unique ability and natural tendency to think before we act.

Over the last few decades, however, researchers have come to realize that our reasoning faculties don't work in quite the way we thought they did. We make logical errors, embrace irrational things, and cling to beliefs despite overwhelming evidence that they are wrong. And many of these types of behaviors can be explained if we look at how our brains work in a new way, one different from the way we have thought about our minds historically.

Most of what I'll be describing comes from the work of Daniel Kahneman and Amos Tversky, which is summarized in Kahneman's best-selling book *Thinking, Fast and Slow*. In that book, Kahneman describes research done by him and Tversky (who died in 1996) in the 1970s that revolutionized cognitive science and created a new field called behavioral economics (work that won Kahneman the Nobel Prize in 2002).

This research led the authors to theorize that the brain works via two separate processes: a fast one and a slow one (thus the book title).

The brain's fast process takes in information from the senses and processes it very, very quickly, helping us gain an immediate understanding of what's going on around us. It is this fast process that does most of the work related to what we think about every day.

In fact, you are using your fast process right now as you read these words. Even though the subject you're reading about (cognitive science) is complex, you already understand the language in which this text is written, which means you don't have to engage in any special cognitive activity in order to figure out the words you are reading. All of this language activity is being processed instantaneously by your fast process.

The slow process, in contrast, is deliberative and extremely powerful but, well, slow. This is the process you would use if I asked you to multiply 45 and 17 (or any set of two-digit numbers) in your head, something your fast process just doesn't know how to do. And when your slow process is engaged, it can overwhelm your fast process to the point of blinding you to what is going on around you.

Most of us have had the experience of being deeply immersed in thought over a complex homework assignment like figuring out a math proof or working on an engaging writing project. While so occupied, we lose track of time and don't notice what other people are saying and doing, even if they're right next to us.

From the perspective of Kahneman and Tversky's theories, what's happening during those periods of deep thinking is that our slow process is effectively paralyzing the fast process's ability to monitor the passage of time or take in sensory input, which is why people often have to shout right in our ear to get our attention when we're working on a challenging problem or project.<sup>1</sup>

Fortunately (or unfortunately depending on the situation), our slow process is rather lazy and would prefer to just allow the fast process to do its thing, intervening only when there's something vital going on that only it can handle.

Before we leave cognitive theory to look at how this model applies to bias (political or otherwise), I want to make one last comment about the fast process.

The fast process makes sense of the world by creating associations and fitting data and associations into stories, and none of us has any control over the rapid associations that take place in our mind when the fast process is doing its thing.

When you hear a song, there's no stopping a flood of memories of the first time you heard the song, the last time you heard it, or the warm feelings that manifest themselves (sometimes physically) when you recall dancing with someone to it.

Similarly (and here I'm taking an example right from Kahneman's book), if you read the words "banana" and "vomit" (like you just did), you can't halt a flood of associations coursing through your mind, some of which can cause physical sensations such as queasiness and/or a bad taste in your mouth.

Getting back to my original joke, we now have a vocabulary to explain why we find jokes of the "three-guys-walk-into-a-bar" type funny. For as we talk about Guy 1 and Guy 2, our fast process is rapidly taking in that information, recognizing the pattern,

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<sup>1</sup> A good example of this phenomenon can be found at <https://www.youtube.com/watch?v=vJG698U2Mvo>

mapping it to a story, and waiting for the next example to fit that pattern we've established.

But just as that storyline is forming, we break the pattern in a surprising way that, for some reason, gets translated into amusement as the story-formation process in our brain gets short circuited.

So that's one theory of how the mind works. But what does this mean with regard to thinking critically about the US election or thinking critically or uncritically about any subject whatsoever for that matter?

Well let's start out with an entertaining example: the notion of "cognitive illusions."

Cognitive illusions are like optical illusions, but rather than tricking the eye, they trick the brain.

For example (and again I'm cribbing from Kahneman), if you ask people (preferably out loud) "how many of each animal did Moses bring on the ark," nine out of ten of them will tell you two. It's only after you tell them that Moses never had an ark that the requisite embarrassment kicks in. (By now, I'm assuming those of you who fell for it recall that it was Noah, not Moses, who did the ark/animal thing.)

The ability to be fooled by this cognitive illusion has nothing to do with intelligence, background knowledge, or experience. It will work on PhDs, priests, and theology professors just as readily as it does on high-school students. But our susceptibility to this brain illusion makes perfect sense if you realize that it's our fast process that hears the question and rapidly makes an association between "ark" and a famous biblical figure with a hard-O sound in his name.

This same type of mismatch between reality and what our brain processes leads to a number of different *cognitive biases*.

Usually, when we talk about bias in a political context, we're talking about the tilt that a person or organization (usually a media source) brings to a story like the election. But if you take a step

back, we are all guilty of certain kinds of biases for the simple reason that we are all human beings.

There are dozens of different types of cognitive biases, but for now let's concentrate on those that leave us vulnerable to manipulation, starting with one called *anchoring*.

Pulling yet another example from Kahneman's book, if you went into a classroom and asked a bunch of high-school or college students if Mahatma Gandhi was 144 years old when he died, probably everyone would answer no. Similarly, if you asked a second group if Gandhi died at the age of 8, they would also know this is wrong.

But if, after being asked if Gandhi died at 144 or 8, everyone in each separate group was asked to write down how old they thought Gandhi actually was when he died, it's almost certain that, when averaged, the first group would give a much higher number than the second.

That's the anchoring effect, and it is extremely powerful. So powerful, in fact, that it can be attributed to a 50 percent or greater difference between individuals or groups that have been exposed to different anchors.

So how can anchoring be used to manipulate people? In a 2011 podcast, former Iowa State University philosophy professor Kevin deLaplant, who also created the online Critical Thinker Academy, mentioned the example of how a US president who orders an airstrike that ends up killing thousands of civilians might use anchoring to minimize the damage such a story could cause to his or her administration.

What he suggests is that the president immediately apologize for an unfortunate accident that may have left a much smaller number of people dead. For once that low number gets into the public's consciousness, it becomes incredibly difficult to dislodge—that's the anchoring effect—and most debates thereafter will focus on how much higher (or lower) than this number the

death toll was rather than an objective review of casualty rates that does not start from a presumed prior value.

As you might expect, anchoring is most effective with numerical information and it works best when you get preferred numbers out as quickly as possible before someone else can anchor the story in a different set of numbers that don't fit your agenda.

In a later chapter, we will talk about ways in which quantitative information can be used to deceive. Anchoring, however, does not require that the quantitative information someone is presenting be false. For example, if a political candidate running against an incumbent wants to propagate an ongoing story of how bad the economy is doing, it's in his or her interest to communicate quickly and frequently quantitative information related to things like high rates or long periods of unemployment. In contrast, it is in the incumbent's interest to rapidly communicate numbers that support the story of an improving economy, such as better-than-expected economic growth figures or upswings in the stock market, as soon as those numbers emerge. In both cases, the candidates are trying to anchor a story related to the economy by being the first to get out numerical information that conform to what they want you to believe.

Having been exposed to your first cognitive bias, let's talk about another technique that takes advantage of our cognitive makeup: *framing*.

Once again, I'm drawing from Kahneman, whose Nobel Prize in Economics was awarded for work he did on the behavior of financial professionals, much of which used betting as a way to evaluate how people approach different choices.

For example, if I were to ask bunch of people if they'd rather buy a \$10 lottery ticket with a one-in-ten chance of winning \$100 or take a bet with a 10-percent chance of winning \$100 and a 90-percent chance of losing \$10, most people would go for the lottery ticket.

But if you step back and think about this choice (engaging your slow process to do so), you'll realize that the second bet is better than the first. If you win the second bet, it cost you nothing to get that \$100, in contrast to the first bet where you're out the initial ten bucks you paid for the ticket regardless of whether you win or lose.

But in our mind, we prefer a frame in which we make a choice to buy a lottery ticket for \$10 vs. the alternative of potentially losing \$10 in a bet, especially one that has such a high-percentage chance of failure. So in this case, the frame makes us do something that is not in our economic best interest.

Getting back to politics, this type of framing is used all the time, especially with regard to how spending (or investment) and taxes (or revenue) are presented to the public.

During debates over President Obama's health-care law, for example, Republicans framed the new law as a tax increase, a frame that leveraged the public's general dislike of tax hikes. The Democrats, in contrast, tried to frame the new law as offering an alternative to expensive insurance premiums, which the public also doesn't like and continues to worry over.

Such framing takes advantage of our fast process's tendency to associate and rapidly create storylines that are hard to replace once established. We can see other examples of this in marketing where an advertiser's job is to build associations and stories in our brains to their advantage.

That's why TV commercials feature attractive young people dancing on the beach while drinking a specific type of soft drink and why cereal boxes feature the faces of famous athletes (vs. skilled accountants). They want to associate products with these positive images and people.

Similarly, negative advertising tries to associate competing products with negative ideas and images. For example, car ads frequently feature a race in which the competition gets left in the dust, associating competing products with negative ideas such as slowness and failure.



In politics, we see the same thing when candidates try to “define” both themselves and their opponents. If you look at how relative unknowns such as Michael Dukakis, who was defined as soft on crime in the 1988 presidential election, or Sarah Palin, defined as a dope in the 2008 race, were successfully framed in negative terms by their opponents, you can begin to see how easily the chinks in our cognitive makeup can be used to other people’s advantage.

Now some of you might have read the last paragraph and thought “boy he sure was right about how cynically the [Republicans or Democrats] trashed [Dukakis or Palin], but he’s wrong about [Dukakis or Palin], who really wasn’t [soft on crime or a dope].”

If you find yourself gravitating towards believing something negative about a politician you don’t like while rejecting similar charges against the party you support, congratulations! You are demonstrating *confirmation bias*, the granddaddy of all cognitive biases.

Confirmation bias is simply the tendency to believe as true those things that conform to what we already believe and to treat with suspicion or dismiss entirely information or opinions that contradict those preexisting beliefs.

If you think about that story-loving fast process we’ve been talking about, confirmation bias makes perfect sense since it just means that our happy-go-lucky fast process has developed a story that helps it make sense of the world and now finds information that fits into that story preferable to information that contradicts it or asks it to do the work of creating a new story to replace the old one.

This confirmation bias is so all pervasive that it’s hard to believe it just emerged as some strange accident.

Some have proposed that confirmation bias served an evolutionary purpose, convincing us to run for cover when we hear

a rustle in the bushes, for example, rather than spending time contemplating what is going on before fleeing.

Even if it turns out that the cognitive bias related to associating every strange noise with danger led to many errors (in the form of needless flight), it was probably in our overall long-term interest as a species to act on this bias and run away when we heard an unexpected sound rather than stay put and potentially be eaten while we ponder what might be making that noise.

The problem is that as our world becomes more sophisticated and our decisions more complex, confirmation bias not only causes us to make errors, it can also cause us to act in ways that are counterproductive to the very things we are biased towards.

You see this dynamic play out in all walks of life. Take business, for example. How many stories have we heard (or been a part of) where a company blinds itself to important trends or changes in market conditions and makes or fails to make decisions based on what they believe vs. what they know?

One of the most famous examples of this is the photographic film company Kodak, which refused to recognize how big and fast-moving a threat digital photography was to its film business despite not just evidence but plain old common sense.

So rather than leverage their money, market position, and expertise to enter and potentially own the emerging digital market and use that position to transition out of the film and film-development business, Kodak instead focused on ways to preserve and extend that film business as long as possible.

As anyone who has worked in business knows, major product and strategy decisions are not made by one or two executives on a whim. So it's more than likely that Kodak's choices and priorities involved market research, proposals, prototype development, and endless meetings in which this direction was discussed, debated, and ultimately chosen over others. So how did such a misguided strategy make it through so many filters?

I would have to guess that different pieces of research pointed towards different conclusions. Given Kodak's preference to believe it could continue to thrive as a film company, I would further guess that it gravitated towards believing research and analysis that confirmed what it wanted to hear and minimized or rejected data that didn't fit that storyline.

So if confirmation bias can cause this level of self-inflicted harm to businesses, costing hundreds of millions of dollars and thousands of jobs, can it also cause us to make political decisions that end up damaging the party or candidates we claim to support?

Let me tell you a personal political story that can help answer this question. Back in 1984 I got very excited about the presidential candidacy of Gary Hart, a young senator who seemed to rack up impressive surprise victories in the early Democratic primaries. And even though he lost the nomination to Walter Mondale that year, I was just as enthused in 1988 when he became the front runner for that year's Democratic nomination.

Sure, I heard rumors about his personal life. But those were easily dismissed as the work of vicious rivals and scandal-seeking pseudo-journalists. While I might have believed (and even sniggered) if similar rumors emerged about a candidate I didn't like as much as I liked Hart, I refused to believe the ones about my preferred choice.

So imagine my shock when Hart was caught red-handed in a situation that confirmed that all the rumors were true (and then some).

As disappointing as that situation was, think about what might have happened if enough biased people like me dismissed those rumors long enough for Hart to have received the nomination and then watched as our candidate and our party went down in flames during the general election if the truth about his personal life became known later, which it likely would have.

Supporters of John Edwards in the 2008 presidential race probably had a similar experience, understanding only now that

their willingness to dismiss or condemn out of hand stories about their candidate's appalling personal behavior (which turned out to be true) could have cost the party they supported the presidential election had Edwards become the nominee.

If it helps, such choices should not make us feel stupid or foolish. Rather they should help us understand how the all-too-human phenomenon of confirmation bias can cause any of us to act against our own interests.

One doesn't have to descend into tabloid politics to see confirmation bias working its destructive path across the political system. How many times have we been surprised by news that a nomination, an election, or a Supreme Court ruling didn't go our way despite the fact that everything we've been reading, watching, or listening to seemed to indicate to us that victory was around the corner?

This is where the latest advances in media technology creates a serious problem, one that we have to confront if we truly want to be critical and independent thinkers.

In theory, the availability of thousands of news blogs and other online alternatives to the traditional "mainstream" media should allow us to broaden our minds by giving us access to different sources of news, data, and opinions that we can compare and analyze before making important decisions.

But more often than not, we are using these new media tools to construct custom news feeds built primarily around our personal confirmation biases. Avoiding people who have opinions we don't agree with by not living in a neighborhood, town, or state that doesn't vote in ways we like is another example of building a fortress within which our biases go perpetually unchallenged.

It's actually kind of ironic that most public discussion of bias centers on accusations of bias against one or more traditional news sources (usually mainstream newspapers or TV or cable news channels). If you think about it, however, the biases of these newspapers, magazines, and TV shows are by design in that they

are “products” created for a certain segment of consumers. And, in this case, the consumers being targeted are holders of specific unshakable beliefs created and driven by confirmation bias.

So the next time you find yourself shaking a fist at MSNBC or Fox for their biased news coverage, keep in mind that these media sources exist to provide a service that we are demanding. In other words, we have met the enemy and it is us.

So how can we come to grips with these all-pervasive cognitive biases, a crucial first step towards becoming a critical thinker?

Well to begin with, notice that I said “come to grips with” rather than “eliminate” since bias, at least cognitive bias, is not a character flaw or bad behavior we can choose to give up. Rather it is an integral part of our human makeup that we need to recognize while not becoming paralyzed by this recognition.

A first step towards getting a grip on the problem is to appreciate that challenges like confirmation biases (ours and other people’s) rarely derive from ignorance or irrationality.

We all need some way to make sense of the world, and one way of doing so is to affiliate with a political party or cause. Usually, the party we support reflects our values, that is, it’s not just some sort of tribe we’ve arbitrarily decided to join. In addition (and more often than not), the political candidates we choose to support possess talents and virtues that warrant our enthusiasm.

But even if our confirmation bias comes from an understandable place, we’ve already seen how too much hardened bias can damage the causes we believe in.

So the first step we should take is to acknowledge relevant biases openly, with a particular emphasis on our own, despite how much easier it is to spot them in other people.

For example, as you might have guessed from my reference to Gary Hart, I have generally supported and voted for Democratic candidates in each presidential election, partly because I liked them but mostly because I have made the choice early in life to identify

with a particular political party (not surprisingly, the same party my parents support).

I know that my party identification goes beyond purely intellectual decision-making since on the one or two occasions I voted outside the party line, I experienced the kind of visceral discomfort you get when you do something unnatural or out of character.

Now given that I am claiming that this book is going to be nonpartisan, that we're going to use election activities as examples to study critical-thinking principles but not to come down on one side or the other regarding whom to vote for, it's important that I put my cards on the table regarding my own personal political biases.

This public announcement of my historical party affiliation gives you some important data you can use to judge whether I am keeping my word regarding the nonpartisanship of this book. More importantly, being up front with this information makes it more likely I'll be extra cautious to avoid letting personal prejudices damage my credibility with readers.

Now a few paragraphs ago, I mentioned being upfront with *relevant* biases, and I used the word very deliberately since in addition to party affiliation, there are a whole host of other things that contribute to who we are. For example, we are all citizens of a particular country and members of a particular ethnic group and gender. Many of us have religious affiliations, and we all fall into some income and age bracket. Each of these categories in some way influences our worldview.

In fact, some people would say that these affiliations come so loaded with biases that any observations, arguments, or decisions we make, political or otherwise, must derive from them.

But here we come to a situation where an acknowledgement of all potential sources of bias can paralyze us, preventing us from believing that we can be free and independent thinkers. In other words, if having no awareness of bias can prevent us from thinking

critically, assuming we are made up of nothing but biases can prevent us from thinking at all.

So let's get back to my earlier confession. Is it relevant for readers of a book on this subject to know the author happened to have voted along certain party lines for his entire adult life? Absolutely.

But are my age, gender, religion, ethnicity, citizenship, and income equally relevant? Not necessarily to this particular educational exercise, especially since you can easily find individuals with widely ranging political positions within any of these categories. What this means is that such categories might not tell us much about any particular individual within them, just as the average height of everyone in your neighborhood doesn't tell you the exact height of your neighbor.

Having talked about owning up to our biases while also making sure we're only focusing on the most relevant ones, wouldn't it be great if there was some simple rule of thumb we could use to help us minimize these biases so they can't cloud our judgment?

Enter the *principle of charity*.

So what is this principle of charity?

The term is normally used in discussions of argumentation and debate and involves engaging with your opponent's strongest arguments rather than just pouncing on his or her weakest ones.

The philosopher Nigel Warburton gives an excellent example of this concept:

*"...in a debate about animal welfare, a speaker might state that all animals should be given equal rights. One response to this would be that that would be absurd, because it would be nonsensical, for example, to give giraffes the right to vote and own property since they would not understand either concept. A more charitable approach would be to interpret the claim 'All animals should have equal rights' as being a shorthand for 'All animals*

*should have equal rights of protection from harm' and then to address that.*"<sup>2</sup>

In the case of our own potential biases (political, cognitive, or other) during an election, this principle can be applied by assuming the candidate we prefer *and his or her opponent* are giving us an honest description of their beliefs, their motivations, and the reasoning behind their proposals before we begin to engage with them and their political ideas.

While it's certainly possible that one candidate running for president is secretly scheming with America's enemies to cause the nation's downfall or that the other is a stooge of wealthy, top-hat-wearing industrialists and financiers, the principle of charity would have us dismiss both of these unlikely scenarios and instead assume that both candidates are sincere, honest, and independent.

Similarly, we would have to assume that both candidates truly want what's best for the citizens of this country, even if they are proposing different means to achieve that same end, rather than believe one or even both of them are conspiring to rule solely for the benefit of an unprincipled minority (be they "militant unions" or "the wealthy one percent").

Embracing this principle is probably the biggest challenge for anyone inclined towards believing the best of their friends and the worst of their enemies, which, since this defines confirmation bias, pretty much includes everyone.

But far from turning our political debates to wishy-washy mush, using the principle of charity to believe the best of each candidate provides a far greater opening to debate issues intelligently, making it one of the cornerstones of good, solid critical thinking.

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<sup>2</sup> See Nigel Warburton, "Principle of Charity," *Virtual Philosopher blog*, January 21, 2007, available at [http://nigelwarburton.typepad.com/virtualphilosopher/2007/01/principle\\_of\\_ch.html](http://nigelwarburton.typepad.com/virtualphilosopher/2007/01/principle_of_ch.html).



If you just think about it for a moment, you'll see why this is so. Take any issue that comes up during an election (economic and budget matters, health care, war and peace) and think for a moment what would constitute a more intelligent and interesting debate: an analysis of the issues based on the assumption that each candidate is proposing a honest, albeit different solution to the same problem or an unthinking embrace of one position as gospel and dismissal of the other as a cynical outrage?

Before wrapping up on this subject, keep in mind that the principle of charity does not oblige you to accept every argument at face value. Someone peddling perpetual-motion machines or quack race theories certainly doesn't merit its application.

But before we assign all mainstream politicians who don't conform to our beliefs to this same category as cranks and crackpots, knaves or thieves, we should recognize that our tendency to embrace one side and condemn the other may be arising from the very cognitive biases we should be working to overcome.

As mentioned before, this is hard and necessary work, but the principle of charity can generally be used to help point us in the right direction.

Try this exercise to see how this can be done:

A few years ago there was a brief political dustup in my home state between the two candidates for senator: one male, one female. In this instance, one of the candidates had posed for fashion photos in his/her youth. This led the other candidate to joke that he/she "didn't need to take [his/her] clothes off to get through college," which led his/her rival to reply, "Thank god."

Now this could have been interpreted as light political banter between rivals (hardly Churchillian in its wit but still humorous). Instead it became the subject of accusation and counter-accusation of sexism vs. snobbery. And if you knew which candidate belonged to which gender and party, you could probably guess on which side most partisans landed in this debate.

But what if you didn't know who was Democrat or Republican, male or female? If, in that situation, you found yourself withholding your outrage until you found out which party each quipper belonged to, more than likely this is not a genuine issue but rather a matter of political theatrics that provides little insight into anything other than your own biases. How much simpler to just apply the principle of charity, assume this exchange to be nothing more than some lighthearted back and forth between rivals that pretty much signifies nothing, and then move onto matters more worthy of discussion and debate.

Similarly, it's just a matter of time before the misbehavior of a presidential candidate when he or she attended high school or college will enter media-driven public discussions. But if you find yourself outraged and appalled over the high-school bullying or drug use engaged in by the person you're not planning to vote for yet completely indifferent to your preferred candidate's history as a youth, then perhaps the vital school-behavior issue is not so vital after all.

By now, I'm hoping you've been introduced to enough background and technique to allow you to understand, recognize, and deal with the all-important subject of bias without becoming paralyzed by its existence.

Subsequent chapters will introduce you to a whole host of critical-thinking tools that can help you make good decisions, defend yourself against being manipulated, and allow you persuade others. But none of these can be effective if we let our biases get in the way.

So with our biases present, accounted for, and controlled, let's take a look at the first of these tools that were twenty-five hundred years in the making: Aristotle's three *modes of persuasion*.