Better Living Through Better Judgment:

Learn your ABC(D)s

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INTRODUCTION:

We are faced with hundreds of choices each day. Some of these are big and consequential decisions whereas others seem minor.

When it comes to big decisions, we are more likely to take some time to consider our choices first. We are less likely to do so for what appear to be unimportant decisions, but these seemingly minor choices add up to make a big impact on our lives. These small choices, ones that take less than five minutes, make up the bulk of our decision-making inventory and as such can add up to even greater consequence than the decisions that we think about carefully. Despite their import, most people make these daily small decisions (and even some of the big ones) without careful consideration and are guided by various biases and external influences rather than rational plans to attain a desired outcome. Frequently, we are not even aware of the hidden and unconscious biases that guide our choices and therefore guide our lives. With greater awareness of such hidden influences, it is possible to develop a greater understanding of our decision-making processes and use this understanding to improve these processes so that choices are in line with goals and values rather than hidden biases.

Before delving the various biases that can lead decision-makers astray, let us first consider the research on how a rational decision-maker would make a choice. Early models of human decision-making assumed that humans are rational beings, who want to arrive at the best decision possible. Such models focused on the way that people should make decisions rather than the often irrational ways that people actually do make decisions. Multi-attribute utility theory (or MAUT) is one such model that describes the decisions-making process that is likely to lead to the "best" outcome. In MAUT, the decision-maker first identifies which features of the choices under consideration are important. For example, a house hunter might identify location, cost, size, and quality of school system. Then each of those attributes is assigned a

multiplier based on importance. Perhaps cost is worth 4 points, school system 3, location 2 and size 1. Next, the decision-maker scores each of the apartments under consideration on each of those attributes, multiplies the score by the importance coefficients, adds up the totals and selects the apartment with the highest score. Such a careful process should lead to the apartment that performs the best on the attributes most valued by the decision-maker. The drawbacks of such a decision-making process are clear – people simply do not have the motivation or ability to invest this level of time and cognitive resources for any but the most important decisions. Even for decisions of great consequence, people are often unwilling to make such an investment. And even if they are willing to do so, they may not know which attributes are most valuable to them or they may apply these values haphazardly rather than systematically. We often instead rely on various decision-making shortcuts that allow us to invest far fewer resources to arrive at a "good enough" decision and avoid the resource-demanding process that leads to the "best" decision. The types of high-stakes decisions that we spend a lot of time and mental energy on are distinct from choice-making, or the frequent, seemingly low-stakes decisions that we make in less than a few minutes.

Many researchers make a distinction between two decision-making processes. One of these processes is non-conscious, relatively fast, and relies on heuristics and shortcuts whereas the other is more conscious, relatively slow, and relies on logic and reason. Scientists disagree on the extent to which these two systems operate separately but most agree that some decisions result from relatively more automatic processing whereas other decisions result from relatively more deliberate processing. Most choice-making occurs automatically (choices such as how close to stand next to someone in an elevator) and even decisions made only after careful reflection and deliberation (such as whether to accept a job offer) often involve unconscious biases that occur outside of our level of awareness. Because careful, reasoned decisions require more time, we are more likely to make decisions automatically if we do not have much time to reflect. Decisions that we make in only a few minutes or even a few seconds (the majority of our decisions) are likely to be dominated by automatic, heuristic thinking. Such thinking is prone to unconscious biases. Overcoming these biases is the key to sound judgment. Learning

the basics of these biases starts with learning the ABCDs of judgment. These hidden influences can be organized into the categories of Assumptions, Beliefs, Conditioning, and Drives.

ASSUMPTIONS

These are the set of conditions that we choose for the purpose of aiding our decision making. The choice of a set of assumptions need not be made consciously and often, people are not consciously aware of their assumptions. Assumptions may be fleeting and do not necessarily carry over from one decision-making context to another.

BELIEFS

Beliefs are a relatively enduring and stable set of convictions or cognitions that we hold to be true. Operating on the validity of these beliefs can lend consistency to one's choices, but beliefs create the opportunity to make consistently poor choices if beliefs are inaccurate or if we carry beliefs over from one context to another when it is not appropriate to do so.

CONDITIONING

The way we go about operating in the world makes up our conditioning. This may include habits and other ingrained behaviors that often result from learning and prior experience.

DRIVES

Drives are a set of impulses that stem from survival instincts. People have a basic motivation to seek pleasure and avoid pain and much of human behavior is organized around pursuing this simplest of goals. These end points (of pleasure vs. pain) may be physical or social in nature – we want to avoid getting stung by a wasp, but so too do we want to avoid getting picked last in gym class. Fear, greed, and ego are all examples of drives.

ASSUMPTIONS

To make choices easier, we rely on a number of assumption- based short-cuts. These short-cuts, or heuristics, can greatly reduce the time and mental demands of arriving at a judgment, allowing people to spend those limited resources on something else. Often, such short-cuts lead us to a sound (or at least good enough) judgment, but other times heuristics lead us down a path towards judgment errors. The fact that we are not aware that heuristics are guiding our decisions makes them particularly dangerous.

One such example of biased judgment is referred to as the representativeness heuristic, through which people make judgments about probability based on similarity to a prototype.

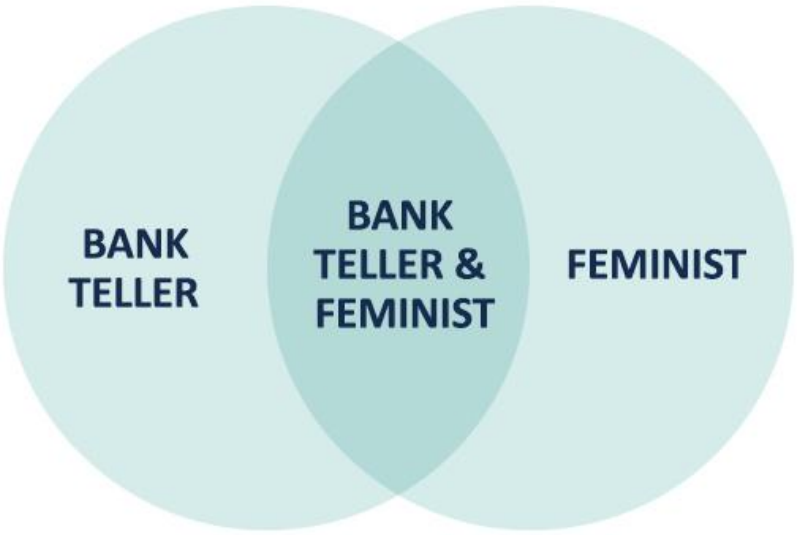
A classic example of the representativeness heuristic is the "Linda problem" made famous by Amos Tversky and Daniel Kahneman (1982), who went on to win a Nobel prize in economics for the study of biased decision-making. The Linda problem presents the following scenario:
Linda is 31 years old, single, outspoken, and very bright. She majored in philosophy. As a student, she was deeply concerned with issues of discrimination and social justice, and also participated in antinuclear demonstrations.

Please check off the most likely alternative:

Linda is a bank teller.

Linda is a bank teller and is active in the feminist movement.

Ninety percent of respondents think that Linda is more likely to be both a feminist and a bank teller than a bank teller based on the fact that the description of Linda fits a certain feminist prototype. This response constitutes an error in judgment is because it violates a basic principle of probability known as the conjunction fallacy. The conjunction fallacy states that it is not possible for two co-occuring events to be more likely than one event on its own. In other words, the overlapping part of the Venn diagram (bank teller and feminist) cannot be larger than the bank teller circle on its own.



Most people can follow the logic of the conjunction fallacy with a moment's consideration but frequently, we do not give a moment's consideration to our choices.

Another biased assumption is failure to understand the tendency for events to return to a certain average –known as regression to the mean (Tversky & Kahneman, 1971). Very tall parents are likely to have children of more average height (Bland & Altman, 1994). An athlete's stellar performance in one game is likely to be followed by a more mediocre (or average) performance in the next (Gilovich, Vallone, & Tversky, 1985). A patient with a very high glucose reading at one appointment is likely to have a lower reading at her next appointment (Barnett, van der Pols, & Dobson, 2005). Failure to understand regression to the mean can lead to biased judgments and bad decision-making. For example, coaches may decide not to praise an athlete's good performance under the mistaken belief that praise leads to complacency and underperformance in the next game when in reality, the player's performance is simply

returning to his base rate, regardless of level of praise. Mayors or governors who take office during crime peaks may unduly take responsibility for crime drops in their first year when in fact the crime rate is simply returning to its average, following a statistical outlier of extremely high crime.

Our failure to understand regression to the mean is rooted in the representativeness heuristic. We expect that a small number of data points are much more representative of the whole truth than is actually the case. While a fair coin should land on heads fifty percent of the time and tails the other fifty percent, people often expect this split to appear in the span of only 20 or 10 or even 2 coin tosses when the full picture requires a much larger sample size.. Collecting sufficiently-sized samples of coin tosses or crime statistics takes time, effort, and a broad perspective – resources that many people lack in everyday decision-making.

An additional biased assumption that pervades decision-making is the availability heuristic — the tendency to judge the frequency or probability of an event by the ease with which examples of it come to mind (Tversky & Kahneman, 1974). In many ways, it makes good sense to assume that things that easily bring to mind lots of examples are more common than events for which we struggle to think of examples. This bias fails to take into account the factors that influence the ease with which examples can be brought to mind that have nothing to do with frequency, such as vividness and media coverage. For example, most people believe that shark attacks are more likely than deaths due to falling airplane parts when in fact, the opposite is true. This error occurs because most people can think of prominent examples of shark attacks such as Jaws but cannot think of any deaths caused by falling airplane parts. Similarly, many more people die of diabetes than homicides because homicides are more likely to make the news, many people falsely believe that murders are more common.

BELIEFS

It is surely sensible to have a stable set of guiding principles upon which to base our judgments and decisions. Ideally, such beliefs are rational and accurate. This is often not the case. Instead,

beliefs create a set of expectations through which we interpret the world around us. These beliefs cause us to see the world as we expect it to be rather than the way it truly is. Not only are novices subject to such distorted views of reality, but experts too can be misled by a set of beliefs, even about topics on which they have a great deal of past experience. For example, one study asked wine experts to judge both red and white wines (Morrot, Brochet, & Dubourdieu, 2001). In reality, the experts all tasted the identical white wine, some of it tinted with food coloring to appear red. The experts described the tinted wine using stereotypical red wine terminology. None noticed that the wine was actually a white.

Clearly beliefs, even false ones, guide our judgments.

It is therefore particularly insidious that most people do such a poor job of updating beliefs in the face of insufficient or even contradictory evidence – a phenomenon known as belief persistence. One reason for belief persistence is the tendency to selectively perceive only that information that conforms to existing beliefs. One exploration of the selective perception phenomenon explored reactions to hit 1970s sit-com *All in the Family*, which chronicled the tension between "lovable bigot" Archie Bunker and his politically liberal son-in-law Mike. Cultural critics derided the show as putting an appealing veneer on Archie's overt racism and making such small-mindedness appear comedic and acceptable. Creator Norman Lear defended his show as a satirical send-up that used humor to puncture viewers' defenses so as to expose the ugliness of Bunker's attitudes. The show was a huge hit during its run. So who was right? Did viewers believe that they were watching a satire or did they think that Archie was indeed a lovable bigot? Were they laughing with Archie or at him? That depended on the racial attitudes of the viewers. Research indicates that viewers with lower levels of prejudice identified with Mike's character, thought that Archie was the butt of the joke, and believed that Mike made better arguments and usually won the fight. Those with higher levels of prejudice identified with Archie, thought that Mike was the butt of the joke, and believed that Archie made the

more reasonable arguments and won most of the fights. Both types of people found the show funny and entertaining (Vidmar & Rokeach, 1974). Millions of people viewed All in the Family, but they did not see the same show. They saw the show that was consistent with their beliefs.

Not only do people selectively perceive what they already believe – people also expose themselves only to evidence that supports their beliefs, ignoring contradictory evidence, a process called selective exposure. Use of selective exposure is particularly acute during an election year. We tend to seek out positive stories about the candidate we already support and avoid unflattering portrayals. Likewise, we seek out disparaging stories on the candidate we don't support and do not seek exposure to positive stories (Bennet & Iyengar, 2008). Selective exposure is one of the reasons why voting preferences are so intractable. We simply avoid exposure to any information that might convince us to change our minds.

The effects of selective perception and selective exposure combine to lead to confirmation bias – a tendency to become increasingly convinced that our beliefs are accurate, rather than testing these hypotheses against new information that might indicate inaccuracy (Snyder & White, 1981; Jonas, Schulz-Hardt, Frey, Thelen, 2001).

CONDITIONING

It is a widely accepted truism in much of psychology that the best predictor of future behavior is past behavior (Triandis, 1977). This is because much of human behavior is determined by habits rather than by logical and deliberate consideration. The influence of past habits becomes more deeply entrenched the more frequently a behavior is called for. For example, the first time you travel from Point A to Point B, you may consider a variety of routes for the trip. The next time you travel between those two locations, you are likely to use the same strategy as the first time (if it was successful). After a number of such trips, you are unlikely to ponder how to make the trip and instead rely on the habits developed over time. Driving habits can become so deeply ingrained that many people report the experience of arriving at work with no memory

whatsoever of the trip from home. Habits form when we repeatedly perform the same behavior in the same context. Eventually, simply encountering the context is enough to trigger the behavior – no conscious thought required. For example, new college students who are already in the habit of biking to get around will choose to bike to class whereas those who have weaker or no biking habits will get to class through other means (Verplanken, Aarts, & van Knippenberg, 1997).

Humans (and non-human animals) tend to repeat behaviors that precede a positive outcome and avoid behaviors that precede a negative outcome, a basic tenet of learning and behavior referred to as the Law of Effect (Thorndike, 1927). After a few pairings of a behavior and a good outcome (or at least, an outcome that is deemed acceptable), a comforting sense of familiarity settles in that fosters the development of the habit (Lally & Gardner, 2013). People no longer contemplate at that point whether a different behavior might lead to a superior outcome because the sense of familiarity pulls us towards regulating behavior automatically, without conscious thought.

Repeated behaviors become more and more automatic until we stop thinking about them at all. This mental resource saving strategy makes good sense when the repeated behaviors come about in a context that does not change. Problems arise when people fail to appreciate that the surrounding context has changed and so behavior should change to appropriately adapt. Patterns of behavior will not carry over from one situation to the next if people are aware that the context has changed. For example, television watching patterns did not carry over from one school to the next when college students transfer because their new circumstances were sufficiently different from the old one to notice the change (Wood, Tam, & Witt, 2005). Sometimes, people will consciously try to form new habits as when people try to adopt a healthy lifestyle through diet and exercise. Though deliberate intentions to change behavior are common, most people give up on their new routines before they can become ingrained as habits. For example, nearly half of Americans make New Year's resolutions, mostly to become healthier (through dieting, exercising, or quitting smoking). Nearly a quarter give up in the first week. One-third give up in the first month. Only eight percent are successful (Norcross,

Mrykalo, & Blagys, 2002). Frequently, we fail to change our habits because we do not see progress towards our desired outcomes quickly enough. A new exerciser is unlikely to see bulging biceps after two weeks of weightlifting and all of those dumbbell curls seem needlessly unpleasant. The exerciser gives up her painful burgeoning habit before it can yield results and before the behavior can become automatic (Ouellette & Wood, 1998). Changing habits has a much greater chance of success if the environment can be rejiggered to provide positive effects immediately, such as by exercising with friends.

DRIVES

Humans (along with many non-human animals) are motivated to seek pleasure and avoid pain. These basic drives guide much of our decision-making and can bias our choices and judgments. Such biases can occur even at a basic perceptual level. We see what we want to see (a tendency towards biased perception, as mentioned above). And what we want to see are things that point us towards positive sensations and away from negative sensations. This principle was nicely demonstrated by Emily Balcetis and David Dunning (2006) in a clever laboratory study. Research participants came to a lab and were told that they would be assigned to either drink freshly squeezed orange juice (a pleasant task) or drink a foul-smelling and vile-looking health drink (an unpleasant task. They were further told that their task would be assigned by the computer. If they saw a letter, they were to drink the juice. If they saw a number, they were to drink the health drink. (Half of participants saw the reverse instructions.) The experimenter left the room, ostensibly to complete some other work. Once the participant was alone, their task assignment popped up on the computer in the form of an ambiguous image that could be perceived as either a letter (13) or a number (B).

Just at that moment, the computer crashed (by design) and the experimenter asked participants to report what they saw, on the honor code. Participants reported seeing whichever figure corresponded to the juice rather than the health drink. Balcetis and Dunning conducted a follow-up study to determine whether participants were simply lying about what they saw rather than seeing what they wanted to see. The study was the same, except participants viewed images that were unambiguously either the letter B or the number 13. All accurately reported what they had seen. None lied to avoid drinking the health drink. These results indicate that our desired outcomes influence the way we see and interpret the world at a basic visual processing level. We see the world not as it exists, but in such a way that allows us to seek pleasure and avoid pain.

Though we are deeply motivated to seek pleasure and avoid pain, we are not equally motivated by these two drives. Instead, we dislike undesirable outcomes more than we like desirable ones. Though finding $20 in a coat pocket cheers us, losing $20 in the wash infuriates us. This feature of choice-making is summed up by the adage that “losses loom larger than gains” (Kahneman & Tversky, 1984). Distaste for loss (known as loss aversion) biases many of our choices. People are more willing pay a usage fee that is presented as a cash savings bonus than an equivalent credit card surcharge (Thaler, 1980) as when gas stations offer a 5% savings for paying with cash (vs. an equivalent, but less appealing 5% surcharge for paying with a credit card). Loss aversion gives incumbent political candidates an edge, as voters dread the loss of an unfavorable change in leadership more than they value the gain from a favorable change in

leadership (Quattrone & Tversky, 1988). Beyond politics, loss aversion changes health behaviors. Women are more likely to complete monthly breast self-examinations when they consider the loss of not doing so (you won't be able to detect a problem) rather than the gain of doing so (you will be able to detect a problem; Meyerowitz & Chaiken, 1987). Loss aversion also results in what is called the endowment effect, in which the value of an item increases once it belongs to you (Thaler, 1980). Due to the endowment effect, people typically charge more money to part with a possession than they would be willing to pay to acquire it (Kahneman, Knetsch, & Thaler, 1990). Companies take advantage of the endowment effect when they offer free trial memberships because consumers value that item - such as a trial subscription to a magazine - more once they start receiving it and become less willing to face the prospect of a magazine-less future (Plous, 1993).

Given the human propensity to avoid risks, it is perhaps surprising that we are generally terrible at evaluating risk information. Perceptions of risk are based more on factors such as how much an event is dreaded than how likely an event is to occur or the number of annual fatalities it causes (Slovic, 1997). While dread can cause people to overestimate some types of risks (generally those with extreme outcomes), people underestimate other, more mundane dangers. Overall, people believe that positive outcomes are more likely than negative outcomes in general and that they personally are even more likely than average to experience positive rather than negative outcomes (Weinstein, 1980). College students rated themselves 15 percent more likely to experience positive events and 20% less likely to experience negative events as compared to others – even others who were quite similar to them (same-sex students at their own college).

Related to the notion that people prefer pleasure to pain is the notion that people prefer positive emotions to negative emotions. People who are sad are willing to take greater risks (and willing to pay more money for the same item) than those who are in a more neutral emotional state (Lerner, Small, & Loewenstein, 2004). While negative emotions impact choices and judgments, not all negative emotions have the same effect. For example, fearful people

have increased perceptions of risk and make less risky choices. Angry people are more similar to happy people in their decision-making tendencies (Lerner & Keltner, 2001).

CONCLUSION

Sound judgment is a prerequisite for a positive life trajectory and is essential for strong leadership. We all want to serve in leadership roles in our personal lives, so that they are lives of purpose and joy. So too is leadership central in the professional lives of executives, human resource professionals and others. Strong leadership requires strong vision, or superior vision. Yet supervision of team members can take time away from broad and global vision. Increasing the judgment of all team members, by educating them about the ABCDs of judgment and decision-making, allows leaders to spend less time on supervision and more time on vision. People often go on auto-pilot when it comes to decision-making and do not make the best choices as a result. We are not, however, doomed to make choices that interfere with goals or lead us to ruin. By learning about how the ABCDs affect decision-making (in both positive and negative ways), people can choose to take control, to add greater awareness to the hidden influences that shape our lives, and to walk on paths of our own creation rather than the garden path right in front of us.

ABOUT US

JESSICA CARNEVALE is an Assistant Professor of Psychology, Purchase College, SUNY. She graduated summa cum laude from Boston University with a BA in Psychology and received her doctorate from Ohio State University in Social Psychology with a minor in Consumer Decision Making. Her research focuses on the consequences of thinking abstractly vs. concretely, in particular on self-control attempts. She also studies the factors that influence whether people adopt an abstract or concrete mindset, including exposure to abstract words vs. concrete pictures and abstract monochromatic images vs. concrete color images. The goal of her research is to develop tools that can help people succeed in self-control so that they can achieve their goals.

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