

## ■ Published Articles

### Leading, Fast and Slow – Part 1

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#### PEER REVIEWED ARTICLE

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Decisions, decisions, and more decisions. Everyone in leadership positions makes countless decisions every day (Heifetz & Linsky, 2002). Some are minor, such as what type of font to use in a memo or what to serve at a department meeting, while others are important and have long-lasting implications, such as hiring a new employee or funding a new project.

A good leader certainly needs to possess many traits in order to effectively make these decisions but the characters in the Wizard of Oz sum it up best. A leader needs courage when tough decisions must be made. A leader needs a heart, as emotional intelligence cannot be overrated when working with people. And obviously, a leader needs a brain to think through the many and varied events that happen every day.

Lawson (2014) made a point that, unfortunately, too many individuals become academic leaders through attrition, longevity, "it's your turn to head the department", or because "I want pay back". These leaders-by-default have not typically been mentored or received any formal leadership training, and are therefore thrust into the position such that 'trial and error' is their only option for leading. As Lawson said, "given academic leaders' importance, and the highly competitive resource environments characteristic of today's higher education, this approach to leadership preparation and support is risky business (p. 264)."

With that as a background, we present *Leading, Fast and Slow – Part 1*. This paper describes the principles of thinking fast and slow as presented by Kahneman (2011) and how 'thinking speed' relates to, and impacts, leadership and decision-making in many dimensions.

#### **System 1 vs. System 2**

In his book *Thinking, Fast and Slow*, Kahneman (2011) described his thinking systems as System 1 and System 2, and offered ten concepts related to each. System 1 is described as being fast, automatic, frequent, emotional, stereotypic, and subconscious. System 2, on the other hand, is described as slow, effortful, infrequent, logical, calculating, and conscious. Anecdotal evidence suggests that most individuals default to System 1 as it is simply easier and requires much less effort to effect. For example, consider the following statement and count the number of F's you see.

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**FINISHED FILES ARE THE RESULTS OF YEARS OF  
SCIENTIFIC STUDY COMBINED WITH  
EXPERIENCE OF MANY YEARS**

This challenge was presented in a recent seminar one of these authors attended. When asked how many F's they saw, one participant responded with "three" while yours truly (Brad) feeling a bit smug replied, "four". The moderator said, "okay we have four, does anyone see five?" Quickly someone said "five" while yours truly said "what?" Shortly thereafter someone said, "I see six". Eventually, as we all slowed down and carefully scrutinized the statement we all found six.

In his book, Kahneman (2011) presents the following question: A bat and ball cost \$1.10. The bat costs one dollar more than the ball. How much does the ball cost? This question has been posed to students at elite universities (Harvard, Princeton, and MIT) with 50% of the students answering incorrectly, while at less selective universities about 80% of the students answered wrong. For many, System 1 thinking leads to the intuitive, but incorrect answer of 10 cents. This response, however, demonstrates the System 1 overconfidence risk inherent in placing too much faith in intuition. The correct answer is 5 cents, and now you are questioning your thinking. Once you recognize the correct answer, it becomes obvious that System 2 thinking was necessary, a slow and deliberate approach to solve the problem.

The mental work that produces impressions, intuitions, and many decisions goes on in silence in our minds (Kahneman, 2012). As we navigate our lives, we normally allow ourselves to be guided by impressions and feelings, and the confidence we have in our intuitive beliefs and preferences is usually justified. For example, if asked to answer, "what is  $2 + 2$ ?" one would quickly and without hesitation state, "Four". Conversely, as one drives along a highway and reads the words on large billboards, it is easy to assume we know all that is written, as we do not want to take our eyes off the road for too long. But our fill-in-the-blank approach is not always correct, yet we tend to be confident even when we are wrong, and therefore an objective observer is more likely to detect our errors than we are (Kahneman, 2011).

The most effortful forms of slow thinking are those that require one to think fast. The law of least effort is operating here, and therefore, one will think as little as possible. Chopra (1994) stated that the law of least effort is based on the fact that intelligence functions with effortless ease and that this is the principle of least action, of no resistance. For example, think about the exercise earlier in this paper when you were asked to count the occurrences of the letter F in the text. What comes quickly to mind in response is often an intuition from System 1. Knowing however that System 1 leads to fast rather than deliberant thinking, an individual will have to start over and search his or her memory very deliberately.

A goal of all leaders and decision makers is to improve one's ability to identify and understand errors of judgment and choice obtained through System 1 (Gould et al., 2013). To do so, one must understand the shortcomings of System 1 in order to engage System 2.

### **Shortcomings of System 1: Heuristics**

The most obvious shortcomings of System 1 are judging, evaluating, and basing decisions on limited evidence. People often use heuristics when making decisions. A heuristic is a mental shortcut that allows people to solve problems, make decisions, and impart judgment quickly and without having to spend much time researching or analyzing the information (Long-Crowell, nd). These rule-of-thumb strategies shorten decision-making time and allow people

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to function without constantly stopping to think about their next course of action. Heuristics are helpful in many situations, but there are times when they fail at making a correct assessment and result in cognitive bias (About Education, nd).

The reliance on the ease of memory search is known as the availability heuristic (Tversky & Kahneman, 1973). In essence, one makes decisions based on what one can easily remember rather than on complete data. Kahnman (2011) stated in fact that, “historians of science have often noted that at any given time scholars in a particular field tend to share basic assumptions about their subject ” (p.8). As such, people tend to assess the relative importance of issues by the ease with which they are retrieved from memory. Other synonyms to describe heuristics include presuppositions, rule of thumb, bias of judgment, thinking errors, dogmatic assumptions, systematic errors, and intuitive flaws (Artinger, Petersen, Gigerenzer & Weibler, 2015).

Certain heuristics lead to muddled thinking and potential errors (Facione & Gittens, 2015; Frigotto & Rossi, 2014). For example, when confronted with a perplexing problem or decision we make life easier by answering a substitute or simpler question. Consider the substitution heuristic in job performance or hiring decisions. The question one should be asking is, “Can this candidate succeed in our department?” Too often however, the question people are discussing is, “How well does this candidate interview?” (Kahneman, 2011). Another example is that an individual likes a project; therefore, he or she determines the costs are low and the benefits high; based simply on how well he or she likes the project. In essence, one never gets around to asking the more difficult questions, such as what are the costs, what is the timeline, do we have the capacity, etc., but instead, the individual has substituted questions that are easier to answer.

What follows are five examples of common System 1 heuristics as identified by Kahneman (2011) and detailed by Johnson (nd).

### ***Biased to Believe and Confirm***

Too often leaders and decision makers are looking for quick answers so they can ‘check’ items off their ‘to-do’ list (Romanycia & Pelletier 1985; Bingham & Haleblan, 2012). In such instances it is easy to accept information on the surface while overlooking contrary, but important examples. In essence, one is not willing or interested in seeing the details but just wants to confirm his or her pre-determined beliefs. This is known as confirmation bias (Nickerson, 1998) or jumping to conclusions.

Confirmation bias is essentially the interpreting of evidence in ways that are partial to existing beliefs, expectations, or a hypothesis that one has previously established. Unfortunately, once one has taken a stance on an issue, one’s primary purpose then becomes that of defending that position (Nickerson, 1998), regardless of new information that may be contrary to one’s previous position.

In practice, System 1 thinking might lead one to make a decision on the basis of a good report from one consultant (Lavinsky, 2012) or a recommendation from a colleague. Conversely, by using System 2 thinking, one might say, “They made that big decision on the basis of a good report from one consultant but did not seem to realize how little information they really had. If we are going to do this right, we need to get as much information as we can from as many different sources as we have time and money.

### ***The Anchoring Effect***

Anchoring bias is a process where individuals are influenced by specific information that is given before a judgment (Chen, 2015; Furnham & Boo, 2011). The anchoring effect is the subconscious phenomenon of making incorrect estimates due to previously heard quantities (Strack & Mussweiler, 1997). For example, if I say the number 20 and then ask you to estimate the number of times the Yankees have won the World Series you will give a higher number

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than if I would have said to you the number 5. People make adjustments based on previous anchors. This anchoring effect suggests that people are more suggestible, given previous information, than they realize.

Bolden, Petrov and Gosling (2008) stated that negotiating is an integral part to successful management and leadership in higher education. When negotiating, the anchoring effect is often used to get the opposing party anchored on a particular number or idea (Strack & Mussweiler, 1997). This number then becomes the point around which discussions occur. For example, in salary negotiations with a new assistant professor, an administrator might put forth a lower salary than he or she is actually willing to settle for in an attempt to get the candidate anchored on that number. Using System 1 thinking the candidate would likely make a counter offer within a couple thousand dollars of the original offer. However, using System 2 thinking, the candidate would think, "I need to be aware of the anchoring point and avoid it when negotiating my beginning salary and start-up package. I need to determine what a starting salary is like for others in my situation and at this institution."

### *Ignores Absent Evidence*

Research suggests that people are often more confident in their judgments than is warranted by the facts (Griffin & Tversky, 2002). In most instances a decision maker is provided with evidence that helps him or her make a decision or solve a problem (Bingham & Eisenhardt, 2011). Based on what is presented, the decision maker says, "This looks great, let's do it". However, in some instances there is little or no evidence; for example, no budget details, no actual peer-reviewed research, or no evidence of having previously worked on this type of project. Unfortunately, this lack of evidence may help confirm pre-determined beliefs (or 'misbeliefs') and the project moves forward or a decision is made, both destined to fail.

Overconfidence is common and sometimes individuals make confident predictions on fallible data, even when they know that these data have low predictive validity (Dawes, Faust, & Meehl, 1989). Consider an assistant professor being evaluated for tenure. One committee member is stuck on using impact factor as the sole criteria for assessing the candidates' publications. This committee member is confident that impact factors truly assess publication status. A System 2 thinking committee member might say, "We need more evidence before we make a decision. The true value of impact factor rankings has been questioned by scholars and this is too important of a decision to not consider all available evidence."

### *Availability Cascades*

Earlier in this paper we discussed the availability heuristic (Tversky & Kahneman, 1973). In essence, this heuristic is a mental shortcut that relies on immediate examples that come to one's mind and operates on the notion that if something can be recalled, it must be important (Kahneman, 2011). Using this heuristic, people tend to heavily weigh their judgments toward more recent information, making new opinions biased toward the latest news with which they are familiar. For example, when asked to estimate numbers like the frequency of domestic violence instances among football players in the NFL, the ease with which one retrieves an answer influences the size of his or her answer. People are prone to give bigger answers to questions that are easier to retrieve and answers are easier to retrieve when one has had an emotional or personal experience (Kahneman, 2011). Furthermore, because one saw someone get fired for making a mistake, his or her belief is that if one makes a mistake he or she will also get fired. Conversely, if one sees someone make a mistake and the leader simply mentors that individual through the mistake, the belief is that it is okay to make mistakes as long as the lesson is learned. One must be careful not to under or overestimate the frequency of an event based on ease of retrieval (often based on personal experience) rather than statistical calculation.

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Similarly, an availability cascade is a self-reinforcing process of collective belief formation by which an expressed perception triggers a reaction that gives the perception of increasing possibility through its rising availability in public discussions (Kuran & Sustein, 1999). For instance, when news stories of a specific incident pile up our statistical senses do not clearly see the picture. A recent plane crash makes us think air travel is more dangerous than car travel. A business mistake makes us think that the company makes more mistakes than they actually do. Over-reacting to a minor problem simply because we hear a disproportionate number of negative news stories can cloud one's thinking and lead to flawed choices.

System 2 thinking might caution, "We need to be careful regarding her comments. Just because she keeps repeating the same story to make a point, it is only one story, and we need to be careful that the one event is not just inflated and swaying our discussion and decision making."

### **Representativeness**

Representativeness is the intuitive leap to make judgments based on how similar something is to something one likes without taking into consideration other factors (Tversky, & Kahneman, 1973). An example would be a basketball coach recruiting players based on how closely their appearance resembles other good basketball players. Many well run companies keep their facilities neat and tidy, but a well-kept lawn is no guarantee that the occupants inside are organized. Evaluating a person or proposed activity on how much it resembles something we are familiar with, without taking into account other prominent or important factors, leads to poor, ill thought-out decisions that are destined to fail. System 2 thinking might say, "This project looks as if it could not fail, but the rate of success in other departments is extremely low. How do we know our case is different?"

### **Summary**

Untrained or ill-informed individuals in leadership roles are certainly at a disadvantage when making decisions. In many departments and/or colleges there is a so-called jockeying for influence and power among the many members. Influence will come from the perceived status of individuals who have achieved their influence via one of five bases of power: 1) legitimate – this comes from the belief that a person has the formal right to make demands, and to expect compliance and obedience from others; 2) reward – this results from one person's ability to compensate another for compliance; 3) expert – this is based on a person's superior skill and knowledge; 4) referent – this is the result of a person's perceived attractiveness, worthiness, and right to respect from others; and 5) coercive – this comes from the belief that a person can punish others for noncompliance (French & Raven, 1959).

As a manager or leader, one must be cognizant of those who appear to have some sort of power position and then watch and listen carefully as those individuals try to influence others and influence department decision-making. A loudly spoken comment does not mean that it is right, an oft repeated mantra or story does not mean that it is true, and fear-mongering should not scare one from making the best possible decision. To ferret out the truth, one must think slowly and deliberately while considering the many dimensions of the situation and ramifications of the decision (Hanson, Hitt, Ireland & Hoskisson, 2013).

In Part 2 of this paper we present seven additional System 1 heuristics and continue discussing the implications and limitations of using System 1 thinking as opposed to System 2 thinking in leadership endeavors.

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