

# **STYBEL PEABODY & ASSOCIATES, INC.**



Maryanne Peabody and Larry Stybel are co-founders of Stybel Peabody Associates, Inc.

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## “Thinking Fast and Slow” About How You Sleep.



*Thinking, Fast and Slow* by Nobel Prize-winning psychologist Daniel Kahneman (2011) is a useful research-based framework for looking at sleep in a new way.

Throughout the book, Kahneman guides the reader through modes of thinking named "System 1" and "System 2." System 1 is an automated response that is often quick, logical and useful, based on prior experiences. For example, if the reader of this piece was asked, "What is 2+2?" the expected, instantaneous reply is "4." You could be doing other things like driving or walking, and you would still get the correct answer. System 1 is great at multi-tasking.

System 1 operates "automatically and quickly, with little or no effort and no sense of voluntary control." Kahneman does not use these terms, but we believe other terms for System 1 might be Lizard Brain, amygdala, and reticular formation.

System 2 is much slower to respond but can handle more complex analysis. If we asked you the answer to  $923 \times 577$ , we expect you could not engage in multi-tasking and answer this question. Kahneman states that System 2 is poor at multitasks whereas System 1 is excellent at it. Another name for System 2 might be cerebral cortex.

For leaders, it is important to think of System 1 as instinctual and impulsive. System 2 provides a cognitive check on the impulses of System 1.

### **System 2 and Leadership.**

Looking at System 1 and System 2 from a "checks and balances" system is healthy and appropriate. For example, a rabbit sees a shadow on the ground. Is it a cloud covering the sun or a hawk hovering overhead? It does not matter. The rabbit's System 1 will urge the rabbit to run for cover.

And for a rabbit with limited cortex operating in the wild, this is a healthy, appropriate response.

But what about you and your work environment?

Here is the problem: System 1 is "always on." But System 2 requires rest. That is one reason why sleep is so critical.

People who do not allow System 2 to get the rest it needs are more likely to allow the instinctual urges of System 1 to drive behavior. That may work for rabbits but there are predictable consequences for humans operating in corporate environments: higher probability of making selfish choices, using sexist language, and making "snap" decisions that do not consider all the important information.

In other words, when System 2 gets tired, an unchecked System 1 brain will make decisions based on fear and habit.

### **Why is this Important for Your Organization?**

We live in a global business environment where information is flowing 24/7. Employees are expected to be 'always-on.'

Most health professionals recommend 7-9 hours of sleep per night. And 35% of surveyed people get LESS than seven hours of sleep per night. (2016). Is this a business problem?

Perhaps it is not a problem if your employees are engaged in routine and repetitive work requiring little executive function.

It is a problem if your employees are knowledge workers who exercise discretion over their work.

### **The Case of Elon Musk**

We often work with leaders who brag about sleep deprivation as a source of pride. It is their way of showing how dedicated they are. The case of Elon Musk may be extreme, but it does drive home the point we are trying to make.

Tesla founder Elon Musk once bragged that he works 120 hours a week. There are 168 hours in a week. Assume his work takes 120 of those hours. Mr. Musk now has 6.5 hours a day for activities like sleeping, exercise, and being with his family.

How is that work schedule working out for Tesla's shareholders?

On August 7, 2018, Musk tweeted "Am considering taking Tesla private at \$420. Funding Secured." This tweet caused the stock to spike in value on that day from \$341.99 to \$371. But the claim was later proven to be false and the stock sank.

Would Mr. Musk have made that Tweet had he had enough sleep?

Mr. Tesla was later photographed smoking marijuana during a business interview. As CEO of a public company, was Mr. Musk's System 2 compromised from lack of sleep.

### **Sleep Deprivation and Corporate Decision Making.**

James, the father of a newborn, works as an analyst in financial services. Parents of newborns often are sleep deprived. James is no exception. He writes: "When we took the baby home, for about the first year, there was very little sleep. I was lucky to get 3 hours a night."

James stated that at work, he was more likely to go along with decisions and suggestions made rather than formulate his own decisions: "I felt like I was on autopilot, I didn't contribute much and just went along because it required too much effort to do otherwise. My willpower was gone."

"Being in finance and having to work from 8AM to 7PM was a big task. I was making mistakes by incorrectly providing valuations that had missing inputs."

## **Sleep Deprivation and Specific Industries**

One profession where sleep deprivation and bad decision making was prevalent is health care delivery.

Some young doctors worked 24 consecutive hours in a shift during their early residency. A study into sleep deprived medical Residents performed in 2004 concluded that 18 of 22 focus groups had frequent concerns about medical errors due to sleep deprivation. Most of the Residents worried about entering wrong information on patients' records, incorrectly prescribing medications and incorrect dosage.

One first year Resident accidentally gave the wrong medicine to a patient. Another Resident doctor describes a situation where the Resident diagnosed an infant with a respiratory infection. However, the infant had a heart murmur. (Papp, 2004)

In a study featured on Annals of Surgery, results showed that out of 7905 participating surgeons, 700 (8.9%) of surgeons made a major medical error in the last 3 months and of that 490 (70%) of those surgeons attributed the error to individual factors like mental burnout and exhaustion. (Shanafelt, 2010).

The situation in health care systems has improved with the introduction of mandatory rest periods for health care delivery workers in some states.

### **Risk management decreases as sleep deprivation increases.**

Researchers found evidence that sleep deprivation favors the pursuit of gain over the evaluation of potential loss. This finding is consistent with Kahneman's System 2/system 1 framework. (Venkatraman, 2011).

Firicano (2018) created an online survey and sent the link to colleagues in the financial services industry. Most of these colleagues manage money. A total of 54 individuals took this survey. 68% of survey takers

reported sleeping 5-6 hours a night. This is under the recommended average of sleep by most health care professionals. However, only about 40% of respondents answered "Yes" to the question "Would you consider yourself sleep deprived?"

The survey then asked "Assume you have \$2000, Would you rather? A) a sure loss of \$1000 or B) a 50% chance to lose \$1,000 and a 50% chance to lose nothing". In the pool of 68% of sleep deprived respondents, 76% went with option B. This is interesting because as investment professionals you are taught, for the most part, that if there is no reason to take risk, then do not take it.

The respondents who slept under 7 hours picked a riskier option.

The survey then asked, "Suppose you have a stock portfolio, at which point will you start to consider shifting around your investments?" A) 20% drop B) 30% drop C) 40% drop or D) 50% drop

Out of the 68% of the survey takers that reporting less than seven hours of sleep, 29% answered C and D, while the 32% of non-sleep deprived were only 17% allocated to C and D.

While this survey did not sample a large percentage of people with various backgrounds, it did show at least a correlation between sleep deprivation and a bias towards riskier decision making.

It is of interest to note that some of Firicano's respondents wrote that they functioned on six or less hours of sleep and yet they did not describe themselves as sleep deprived. This is consistent with the Elon Musk concept of using sleep deprivation as bragging rights.

In discussing a subordinate's sleep, do not ask, "Are you getting enough sleep." The likely answer is going to be "yes." You do want to ask, "On average how many hours of sleep have you had over the last week, excluding weekends. I mean sleep. Not being in bed."

## **Summary and Conclusions**

According to Nobel Prize winner Daniel Kahneman, we have two systems in our brain: System 1 and System 2. System 2 is “always on” but System 1 requires rest. If System 1 does not get the rest it requires, it does not effectively regulate System 1.

Sleep deprivation is common. Many employees are unaware of how sleep deprived they are. They may even brag about how little sleep they get as a measure of commitment to the organization. Chronic sleep deprivation may include taking unnecessary risks, and reacting in ways that others perceive as thoughtless and insensitive, etc.

We recommend the following:

- Encourage employees to get 8 hours of real sleep. That might involve shutting down mobile devices at a certain hour.
- Employees with infants are going to have sleep deprivation issues. Can they get permission to take needed naps during the day?
- In designing open office space, can there be nap rooms for employees who need time to recharge System 2? This issue is particularly critical if you have knowledge workers with babies. Having such rooms might help you attract young professionals to join your organization.
- If some of your staff have private offices, can they be encouraged to shut the door, bring a small pillow, and take a 20-minute nap?

A company is not a machine. It is not a computer. It is a social system run by human beings. If System 2 is not allowed to refresh itself through sleep, it will not exercise enough executive function over the impulses of System 1.

Expressing concern about your team members’ sleep habits is not about being a “nice boss.” It is about your fiduciary responsibility to assure that you create an environment that fosters good decisions on behalf of customers, patients, and fellow team members.

## **Acknowledgement.**

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## About the Authors



**Dr. Laurence J. Stybel** and **Maryanne Peabody** are co-founders of the Boston-based B:B firm, Stybel Peabody Associates, Inc. They provide corporations with retained search for Board members, CEOs, COOs, and CFOs; 1:1 leadership coaching; and executive outplacement.

Business leaders wishing a free 30-minute  
consult can contact:

Maryanne Peabody

Stybel Peabody Associates, Inc.

[peabody@stybelpeabody.com](mailto:peabody@stybelpeabody.com)

[stybelpeabody.com](http://stybelpeabody.com)

[boardoptions.com](http://boardoptions.com)

