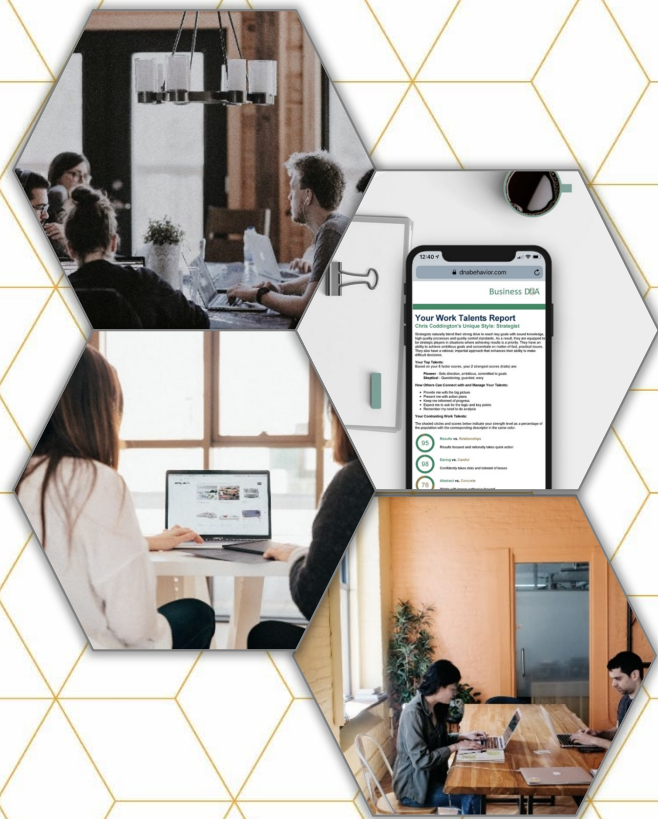


A Guide to Measuring and Managing Human Behavior Variability



Measuring and Managing Human Behavior Variability

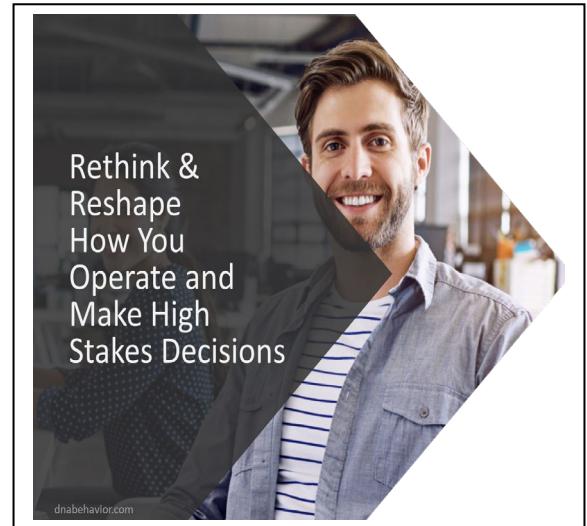
Introduction To DNA Behavior and Unlocking the Human Behavior Problem

DNA Behavior was founded in April 2001 as a behavioral sciences firm. We have used our extensive depth of over 4000 scientifically validated behavior and money insights for helping more than 1.8m people per year globally in 123 countries manage high-stakes decision-making.

We have always said that the cause of most organizational problems is human behavior. Therefore, the solutions to those problems involve having a more extraordinary ability to discover and manage human behavioral differences. This was the genesis of our continued belief that "behavior drives performance," and the early exercising of intuition in making decisions without thinking may cause misfortune. Research conducted by Harvard in 2002 had proven that 87% of business problems are behavior and communication-related.

The first main barrier to addressing human behavior in organizations has been that many of the issues are too invisible for most concrete left-brained leaders to see and navigate the problem. Then, for those more right-brained leaders who can intuitively sense the issue is behavior-related, it has historically been too intangible for them to convince their more left-brained leaders to take long-term action. But today, new robust research and methodologies have enabled DNA Behavior to more directly measure the financial impact of human behavioral differences, or what is called "Behavioral Variability." Behavioral Variability exhibits itself in decision-making across many areas of a business. Therefore, the prevalent behavioral causes which once seemed invisible can now be projected as highly visible.

Given that the recognized cause of most organizational problems is human behavioral differences and consequential Behavioral Variability, the second main barrier has been managing them in real-time on a scalable basis. Scalability can now be achieved with human interactive "cobot" technology powered by the DNA Behavior API, enabling a behavioral chip known as "Gene" to be embedded inside business systems.



"Most organizations do not solve their problems not because they cannot solve them, but because they cannot see them. Most problems start with the behavioral differences of the people. This is where we look first whenever we are asked to transform an organization." – Hugh Massie, Chairman and Founder of DNA Behavior International, March 2004

Navigating the Invisibility of Behavioral Variability

This guide is intended to be a practical manual for helping you consider and address the measurable financial problem that many organizations face because of the hidden influence of human behavior in decisions and provide a disciplined methodology for making decisions.

Since 2001 at DNA Behavior, we have seen numerous situations where organizations have professionals making very different decisions on similar facts and types of transactions. Whereas it is expected the decisions should be identical. This is what we call "Behavioral Variability" at work. If this Behavioral Variability could be reduced, an organization could potentially experience increased benefits in the following areas:

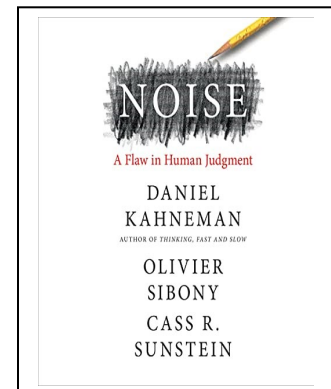
1. Gross revenues
2. Cost savings
3. Productivity improvement
4. Risk management (Governance)
5. Hiring and performance management
6. Business process execution

To explore how to measure and manage Behavioral Variability, we have utilized research from the deployment of the DNA Behavior systems since 2001, which measure human behavior for improving decision-making. In addition, we have obtained insights provided in the book "Noise" by Daniel Kahneman, Oliver Sibony, and Cass Sunstein (published in 2020), which is rich in research on the impact of Behavioral Variability and the techniques for reducing it.

While DNA Behavior uses the term "Behavioral Variability", Kahneman et al. explain it as a combination of systemic Biases (which Kahneman addressed in his 2012 book called Thinking, Fast and Slow) and Noise representing the variable behavioral influences and factors impacting decisions. As you will see in this guide, while Biases and Noise in any decision are separately identifiable errors, they nevertheless have a close relationship.

The impact of human Behavioral Variability is often experienced at a substantial level when:

1. Different decision-makers make intuitive judgment calls concerning similar operational decisions required daily within the business without (a) appropriately set benchmarks and (b) understandable guidelines, and
2. When groups make complex decisions (e.g., a Board or a team) without a structured process to (a) reduce prejudgments, (b) address false or inadequate information and (c) align an appropriate balance of risk and reward.



DNA Behavior®

The problem is that with people having different behavioral styles and perspectives, the early use of their intuition without enough cognitive reflection can lead to sub-optimal decisions. Research performed by Kahneman et al. reported in *Noise* shows contrary to popular belief that intuition is only 28% accurate. So, this means there is a lot of room for judgment errors to be made.

Contrary to popular belief, intuition is only 28% accurate often being polluted by ignorance of the facts, resulting in needless errors.

"For instance, let's consider you are a well-established organization making a high-stakes strategic marketing decision about growth and client acquisition. Historically, for the past 35 years your target clients have had a gross revenue of \$1m because that was considered the minimum to benefit from the service and pay the fees, and they were under 35 years old.

Most people would intuitively think that the number of businesses with a US\$1m gross revenue is substantially higher today in 2021 than it was 35 years ago in 1996. Perhaps, one would therefore think the equivalent 2021 turnover should be in the area of \$3m given inflation. Should the company raise its minimum revenue to US\$3m? However, the independent research shows in 2021 that only 9% of businesses reach \$1m of turnover (refer www.smallbizgenius.net), at similar levels to 1996. So, the data shows reaching US\$1m is still very difficult. Interestingly, through that 35 year period, we have lived through relatively low inflation levels.

This scenario has additional implications because many people think that over the last 35 years the average age of a person starting a business would be much lower than 35 years old given the success of some young mega stars. This is because of the availability of tech and the growth in software programming associated with smart young minds. Or, simply, younger people cannot, or choose not to, take a traditional career path despite their educational qualification. However, a 2018 Harvard Business School research study shows that the average age of people starting a business and growing it past \$1m has increased to 45 years old. Why? Because in today's world, experience is needed along with mental strength and resilience."

We often think that the situation has changed or perceive it to be different to what it is, but the facts don't bear that out.

"Intuition is different to [the] facts". – Hugh Massie, 2021

The point here is if you are an organization making decisions about your clients and prospects, the early use of your intuition based on prejudgments or a preconceived notion of what you want the answer to be can lead to making a wrong decision. Further, as already stated, if different decision-makers are looking at this problem, they would likely come up with different judgments on what decision to make.

Behavioral Variability in the Real World

1. Based on the research of 828 CEO's and senior executives from a range of industries provided in the Noise book, their median and most frequent guess was that you could attribute 10% of inconsistent decision-making to Behavioral Variability, followed by the second most frequent guess of 15%. However, Behavioral Variability is generally five times greater than people think.

The decision variability caused by Noise is often 5 times greater than people routinely guess at only 10%.

2. The Noise book cites several areas where judgment error occurs, causing Behavioral Variability:
 - a) Multiple financial planners assess an investor client in a similar factual and demographic situation to have a different risk tolerance for portfolio allocation. If one portfolio has too much risk and another not enough, then there is the risk of losing client money versus a dissatisfied client not achieving their goals
 - b) Medical diagnosis, e.g., pathologists have a 39% variance in diagnosing the severity of biopsy results.
 - c) Court and other legal decisions involving sentencing and the award of damages.
 - d) Forecasts of revenue and costs can be up to 71% variable from the average.
 - e) Fingerprint analysis.
 - f) Patent and trademark decisions.
 - g) Financial analysts and venture capitalists have a 41% variability level in making company valuations based on the similar description, cashflow forecasts, accounts, and projections.
 - h) Loan officers giving loans and credit analysis.
 - i) Real estate valuations.
 - j) Software developers estimates of time projections for the same project have a 71% variability level.
 - k) Hiring and performance review panels have a 35% to 38% variability level – if one candidate gets a higher ranking they deserve and one lower, then the wrong decision will be made.
 - l) Insurance premium underwriting has a 55% Noise level – if one policy is overpriced and another underpriced, both errors have a cost in terms of lost business or losing money.
 - m) Insurance claims adjusters have a 43% variability level in the payout of their claims. If claims adjusters over or underestimate the forecast payouts and mismanage claims payouts, this can ramp up costs or cause loss of customers or litigation.
 - n) Accountants, project managers, and software developers estimate significantly different amounts of time to perform the same work.
 - o) Tax advisors advise differently on a reasonably arguable tax position for the deduction of certain types of expenses.
 - p) Product and operational decisions based on individual approaches to strategy, past experiences, and inconsistent judgments have a high level of Behavioral Variability.

Keep mind that even if your professions were not mentioned, Behavioral Variability is almost certain to impact your industry and organization. For instance, the decisions to go to war in the military, how many troops are required, ammunition and equipment acquisition, and management.

The Role of DNA Behavior in Addressing Behavioral Variability

The first step to reducing Behavioral Variability is for your leaders to accept that it is a potentially substantial problem despite being invisible. While Behavioral Variability cannot directly be seen in the financial statements (like a strong, sustainable culture cannot be), both Bias and Noise are nevertheless ever-present and can contribute to substantial organizational costs. Therefore, the Behavioral Variability caused by both Bias and Noise needs to be measured and then reduced or eliminated.

The role of DNA Behavior is to help your organization:

1. Understand the general sources of Behavioral Variability caused by Bias and Noise (refer to Appendix A).
2. Conduct a Behavioral Variability Study to identify and statistically measure the prevalence of Bias and Noise in your organization (refer to Appendices B and C).
3. Implement a disciplined decision management process to reduce the Behavioral Variability caused by Bias and Noise (refer to Appendices D to I). A disciplined decision-making process will be structured around the principles of delaying intuition until there is an appropriate cognitive reflection level. The recommended cognitive reflection process will involve the following steps:
 - a) Participation in the DNA Natural Behavior Discovery Process by every person included in the decision-making process. This will identify their DNA Natural Behavior Style, including their biases and other traits influencing decisions. The participants would have board members, executive leaders, decision experts or judges, advisors, and clients (if applicable).
 - b) Utilizing "digital twin" technology to test the decision-maker's decisions against what would be decided in a similar case by a panel of experts.
 - c) Obtaining outside evidence, including independent opinions.
 - d) Allowing for independent voting through a sequenced decision-making process.

The future of decision-making for leaders, professionals and experts should include a combination of:

- DNA Natural Behavior Discovery
- Comparison Against a Digital Twin
- Outside Evidence
- Independent Voting
- Delayed Intuition.

DNA Behavior[®]

To learn more about DNA Behavior International and the solutions we offer, please visit:

www.dnabehavior.com

If you have any questions or would like to discuss with an executive on our team, please email us at:

inquiries@dnabehavior.com

