



What Scientists Can Learn from the Science of Behavior

Sigrid Gustafson, Ph.D.

As our Web site shows, ADI serves a range of enterprises that extends across four continents. Amid this diversity, one of our unique strengths applies behavior analysis to managing the performance of scientists in environments like national laboratories and academic centers. Such environments are, indeed, singular places. Scientists, and similarly-employed engineers, expand the boundaries of knowledge in every field that ultimately affects society's future—from mapping the human genome to exploring the “stuff” of

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the universe. In an October 18 interview on NPR’s “Wait, Wait, Don’t Tell Me,” Adam Wiess, co-winner of the 2012 Nobel Prize in physics, noted that we have identified only three percent of this “stuff”: “We’re really just the frosting on a cake, and we don’t know what’s inside the cake.”

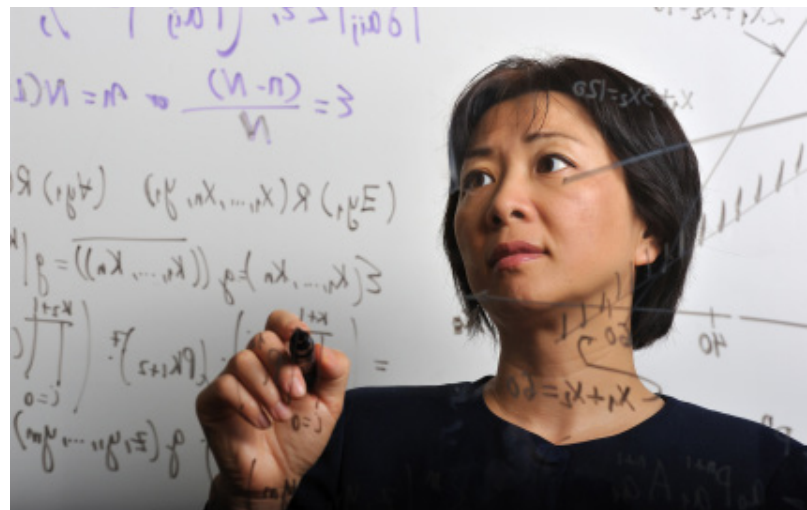
Moreover, in many ways, individual researchers appear to embody what we call “discretionary effort™,” the accelerated and sustained behavior that generates top performance. Not only do they ground their identity in their careers and adhere to arduous schedules but, far from experiencing the reinforcement of regular success, they also persevere through repeated periods of frustration. At a 1929 press conference, Thomas Edison remarked that “none of my inventions came by accident. I see a worthwhile need to be met, and I make trial after trial until it comes. What it boils down to is one percent inspiration and ninety-nine percent perspiration.”

Given such scientists’ high performance as individuals, managing a scientific team

poses a special challenge: ironically enough, the very attributes that motivate what appears to be “discretionary effort” at the individual level can hinder sustainable progress at the team level. Stated simply, the science embodied in behavior analysis reflects a basic principle—that regardless of intention, personality, attitude, ambition, or even genius—every contact among individuals is a reciprocal, dynamic interaction that delivers consequences to all parties involved. We influence one another continuously—behavior science reveals how to exert that influence effectively and ethically.

Furthermore, let us acknowledge two crucial corollaries: first, consequences are not the main cause of lasting behavior change—they are the only cause. Second, individuals’ reactions to a particular consequence (whether they experience it as reinforcing or punishing) depends upon their own previous experiences (i.e., their “reinforcement history”); hence, successful managers know their own people.

The upshot of this brief primer is that unless a brilliant scientist/engineer functions in virtual isolation—a situation that runs counter to most organizational models—he or



she influences the culture of the whole work group. Therefore, personal characteristics that might not adversely affect “discretionary effort” at the individual level (e.g., total ab-

sorption in the problem at hand; discomfort with interpersonal relations, especially with conflict; lack of skill in coaching, reinforcing, or acknowledging the contributions of co-workers; resistance to change; etc.) could undermine organizational performance. We’ve all seen examples of such phenomena when the most talented physicist in a group founders rather dramatically after being promoted to a manager position.

So how, then, does ADI approach this conundrum? How do we gain the participation of top-level scientists and engineers whose typical response to any occasion for “HR training” tends to combine skepticism, impatience, and boredom—with perhaps a soupçon of hostility? The answer is to focus our program on behaviors and results.



[About the Author]

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Dr. Sigrid Gustafson is an industrial-organizational psychologist by training, with more than 25 years’ experience in designing, coaching, and evaluating large-scale applied research projects. She received her Master’s and Ph.D. in psychology from the Georgia Institute of Technology and holds a Master’s degree in English from Cornell University. Prior to joining ADI, Sigrid was a Principal Research Scientist at American Institutes for Research in Washington, DC and in Chapel Hill, NC.

[About ADI]

Regardless of your industry or expertise, one thing remains constant: People power your business. Since 1978 Aubrey Daniels International (ADI) has been dedicated to accelerating the business and safety performance of companies worldwide by using positive, practical approaches grounded in the science of behavior and engineered to ensure long-term sustainability. ADI provides clients with the tools and methodologies to help move people toward positive, results-driven accomplishments. Our clients accelerate strategy execution while fostering employee engagement and positive accountability at all levels of their organization.

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