C O M M E N T

LEVERAGING CLIMATE CHOICE ARCHITECTURE FOR EFFECTIVE BEHAVIOR CHANGE

by Tabitha A. Scott

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We are at a pivotal moment in history. Our separation from nature has created an epic imbalance in our climate, our well-being, species health, and the availability of resources. If we are to truly mitigate climate change, there is an urgent need to embrace behavioral science as a powerful tool capable of profoundly enhancing the quality of life for future generations.

For over 20 years, I have been applying different techniques to transform human behavior in ways that reduce energy use and introduce regeneration. That's why I was so inspired by Prof. Felix Mormann's article *Climate Choice Architecture* and his innovative approaches to effectively leverage the human decisionmaking process within regulatory frameworks and policy interventions to ethically steer societal decisions toward sustainable practices.

Businesses are a bridge between policymakers and the public—they can test ideas that can be cultivated and grown with future legislation in communities. In particular, I would like to highlight three aspects of the article that resonated with my own experiences and research in the hopes that they will also resonate with you. These are the identification of positive, shared outcomes, the utilization of nudges, and application of modern technology for implementation and consistency.

Professor Mormann's introduction masterfully highlights the pivotal role of behavioral change in tackling the global climate crisis. He underscores the profound impact of choice architecture—subtle changes in decision environments—on influencing climate-conscious decisionmaking. Drawing from the seminal works of Nobel Laureate Richard Thaler and Prof. Cass Sunstein, Professor Mormann champions the strategic use of small "nudges" to guide individuals and organizations toward sustainable outcomes, which I have found effective throughout my career.

I. Strategic Application of Choice Architecture to Advance Climate Change Goals

Each form of choice architecture outlined in the article influences decisionmaking in distinct ways. For example, **Decision Information** focuses on making decisions easy to understand, **Decision Structure** uses defaults to simplify choices, **Decision Assistance** prompts action through reminders, and **Government as Choice Architect** fosters a sense of belonging by aligning choices with societal norms. Through nuanced exploration, Professor Mormann elucidates how leveraging these various techniques can effectively guide individuals and organizations toward climate-friendly behaviors and outcomes.

This taxonomy of nudges offers a comprehensive framework to align positive outcomes with audience values and motivations. I successfully applied this framework throughout my tenure as senior vice president of innovation and sustainability at two global companies that owned and operated military housing communities as part of public-private partnerships. By leveraging the choice architectures identified in Professor Mormann's article, we helped families meet their personal goals while also reducing energy consumption and lowering expenses, as follows:

Decision Information. Our primary initiative was to reduce energy consumption at several military housing communities. During our first attempt, we provided a comprehensive list of energy-saving tips to the residents of Fort Campbell Family Housing. This list proved overwhelming for residents, who were unsure which tips best applied to them. The result was decision paralysis, with no actions taken. Using Professor Mormann's principle of decision information, we translated myriad ways to conserve into a simplified focus that addressed just one specific behavior in a revised campaign at Fort Drum Family Housing. By centering the message solely on turning off lights when not

in use, we observed a 6% reduction in consumption.[1] This technique resonates deeply with behavior change science, where we often use simplified information to positively influence behavior.

Decision Structure. Another challenge we faced dealt with thermostat usage. Most residents wanted to regulate their home temperatures within pre-established norms to avoid unexpected costs at month-end. Despite providing training on how to accomplish this using the smart thermostats in their homes, most chose not to follow through. Applying the decision structure concept, we used defaults to play a significant role in guiding individuals toward sustainable choices that aligned with shared goals and benefits. As such, we switched the wording in the lease agreements from opting "in" to thermostat set-up upon move-in to opting "out," which more effectively empowered residents to manage their energy usage effectively. This change allowed residents to achieve their cost-reduction objectives and avoid surprises, while also lowering greenhouse gas emissions. Plus, they retained the choice to opt out at any time. Imagine if all 150 million multi-family homes in the United States deployed similar methods!

Decision Assistance. Professor Mormann also briefly discusses decision assistance, the integration of modern technology into climate choice architecture. Drawing from my experience with AI, smart meters, and technology-driven solutions for behavior change, I strongly advocate for the potential of digital tools to promote sustainable practices. Automated reminders, personalized recommendations, and real-time feedback mechanisms can significantly enhance the effectiveness of nudges, aligning actions with positive outcomes and reducing the effort required from busy, distracted people.

Decision assistance proved highly effective in helping residents achieve their goal of reducing energy costs. In 2013, I was part of an initiative that launched the Switch4Good program in collaboration with Balfour Beatty Military Housing management, WattzOn, and the U.S. Department of Energy Office of Scientific and Technical Information. This innovative program combined smart meter data and AI to deliver near real-time reminders to residents. Residents opted into a savings program that leveraged smart meter patterns to detect specific energy use behaviors. First, they chose their preferred communication channel, such as text, call, or Facebook message. Then, we would send personalized nudges—tips reminding them of actions they could take to save energy. This targeted combination of relevance and timely reminders proved immensely successful. Across 11 U.S. Navy communities, energy consumption was reduced by an average of 15% without requiring any retrofits. Furthermore, AI was instrumental in identifying effective nudges and refining

them over time, while discontinuing ineffective ones. By facilitating residents' desires to conserve energy, this initiative was a win-win for all involved.[2]

II. The Agility and Adaptiveness of Nudges to Address Scientific Uncertainty and Unexpected Disruptions in Policy Changes

Professor Mormann's argument for climate choice architecture as a complement to traditional regulatory approaches like carbon pricing is compelling. By aligning positive outcomes with audience values and motivations, addressing cognitive biases, promoting common ground in polarized political landscapes, and fostering climate-friendly social norms, nudges can play a pivotal role in accelerating climate action. While acknowledging critiques regarding efficacy and ethics, Professor Mormann navigates these challenges adeptly, emphasizing the nuanced application of nudges in specific beneficial contexts.

Though this audience is primarily made up of lawmakers, I believe that Professor Mormann's assertions regarding policy leverage are also pertinent to businesses striving to reach critical tipping points. For instance, in sectors with slow governmental progress, such as green building initiatives in the United States, organizations can incorporate sustainable design principles, such as local renewable energy and motion sensors, into their default proposals. Although clients may opt out, *establishing green building as the default rather than the exception has the potential to regenerate communities from the ground up*.

Buildings account for 37% of global emissions, highlighting the urgent need for improvement within the built sector. Checking the box on "sustainability" is no longer enough. It seems we are suffering from carbon-tunnel vision, missing the bigger picture of our disconnection from the natural balance and regeneration found in nature. We must seize the opportunity to reconnect dynamically with clients, workers, communities, and competitors, by establishing progressive default behaviors that inspire real change in the built sector, focused on regeneration. I recently accepted the honor of serving as Executive Sustainability Officer at Gilbane Building Company, which is renowned as one of the top 10 green builders in the United States. With over 150 years of legacy, including building the Smithsonian's National Air & Space Museum near our ELPAR Conference in D.C. this year, Gilbane is poised to leverage this historic moment of climate crisis to realign with nature's balance over the next 150 years.

Professor Mormann's insights deeply resonate with our work at Gilbane, where we have witnessed how nudges can spark substantial behavior change and ultimately lead to emissions reductions on both an individual and commu-

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1. Tabitha Scott (formerly Crawford) & Richard Lucy, *The 3-Legged Stool Strategy Optimizing Energy Savings*, in Encyclopedia of Energy Engineering and Technology (Ass'n of Energy Eng'rs, 2010).

2. Tabitha Scott (formerly Crawford), *Switch for Good Community Program*, Nat'l Energy Tech. Lab'y (Smart Grid Data Access: DE-FOA-0000612), https://www.osti.gov/servlets/purl/1123876/.

nity scale. By leveraging nudges effectively, we have the ability to navigate uncertainties and tailor policies to yield tangible environmental outcomes in countless ways, cascading from individual to communities, regions, nations, and ultimately, the world. Each audience member and reader of this review plays a pivotal role in this transformation. After all, what in nature grows from the top down?

III. Addressing Critiques Regarding Efficacy and Ethics

Professor Mormann aptly addresses valid concerns about the potential risks that nudges will no longer be beneficial to all if they are used to create imbalance, highlighting the importance of ensuring equitable outcomes for all. His arguments align with my belief that nudges can be ethically and effectively deployed to accelerate emissions reduction in a win-win manner. By exercising caution and prioritizing principles of equity, transparency, and mutual benefit, we can combine behavioral insights with modern technology to design impactful policy interventions that drive meaningful change and contribute significantly to mitigating climate change.

IV. Conclusion

Professor Mormann's article provides a compelling framework for leveraging climate choice architecture to accelerate emissions reduction. By harnessing the adaptive nature of nudges and thoroughly understanding these architectural nuances, policymakers can design and implement policies that drive tangible environmental outcomes and contribute to a sustainable future for generations to come.

As someone committed to driving positive, sustainable behavioral change, I find Professor Mormann's insights both motivating and actionable. By identifying beneficial shared outcomes, leveraging nudge architecture, and harnessing modern technology, we can empower individuals, organizations, and governmental bodies to make lasting contributions toward sustainability. Thoughtfully implementing climate choice architecture, with a focus on ethics and effectiveness, holds immense promise in powering the transformative change we urgently need to combat climate change and reaffirm our connection with the natural world.