White Paper

# Navigating Behavioural Change:

Theory Landmarks and Conceptual Guideposts for

Applied Behavioural Science Consulting

(30-05-2024)



## 1. Introduction

As organisations seek effective strategies to navigate the complexities of human behaviour, the insights and methodologies derived from behavioural science become increasingly invaluable. In this paper we delve into the intricate realm of applied behavioural science consulting, providing a comprehensive overview of the principles and practices guiding Behavioural Leeway as a science-driven behaviour change consultancy. The paper will illuminate key theoretical landmarks and offer conceptual guideposts that underpin the use of behavioural science for transformative change within organisations and beyond.

The paper is structured in seven chapters: Chapters 2 to 5 cover Behavioural Leeway's four areas of expertise. Chapter 6 provides a brief overview of some cross-thematic issues in behavioural intervention design. Chapter 7 concludes with a brief outline of our understanding of the core business of applied behavioural science consulting, i.e. translating behavioural scientific insights into actionable advice and guidance for our clients.

### *Harnessing Behavioural Leeway*

In the context of applied behavioural science consulting, understanding behavioural leeway involves recognising the extent to which individuals have the capacity to deviate from habitual or automatic responses and the degree of agency they possess in shaping their behaviours. **Behavioural leeway acknowledges that human behaviour is influenced by a variety of factors, including cognitive processes, social influences, environmental cues, and individual preferences, and it underscores the importance of considering this variability when designing interventions or strategies to promote behaviour change.**

The leeway to change behaviour can be leveraged for managing organisational change by recognising and utilising the inherent flexibility individuals possess in adapting to new circumstances. This involves understanding the contextual factors that influence behaviour within the organisation and strategically implementing interventions that capitalise on this flexibility to facilitate desired changes. By acknowledging and harnessing this leeway, organisations can effectively navigate transitions, foster employee engagement, and drive successful change initiatives.

## *1.1 Overview of Applied Behavioural Science Consulting*

**Applied behavioural science consulting is an evolving field that leverages insights from behavioural science to provide actionable advice to organisations and inform public policy.** This field focuses on understanding and influencing human behaviour to propel effective change and improve decision making processes.

The evolution of behavioural science as a theoretical and conceptual pillar for practical applications is underpinned by several key disciplines identified in the scientific literature. Behavioural economics integrates psychology and economics to understand decision making processes, challenging traditional economic assumptions of rationality. Cognitive psychology explores mental processes such as perception, memory, and reasoning to comprehend how people think and make decisions. Social psychology examines how social interactions and contexts influence individual behaviour, emphasising the role of social norms. Additionally, the concepts of nudging and choice architecture focus on subtly guiding behaviour by structuring choices in ways that lead to better outcomes without restricting freedom.

### *Prominent Use Cases*

Behavioural science consulting has been effectively applied in various contexts. In organisational change management, behavioural insights are utilised to improve employee engagement, enhance team performance, and foster inclusive workplace cultures. In public policy design, behavioural science helps craft policies that leverage insights to address social issues such as health, education, and environmental sustainability. Moreover, understanding consumer decision making processes aids in developing more effective marketing strategies and product designs.

### *Using Behavioural Science as a Lens*

The "Manifesto for Applying Behavioural Science" (Hallsworth, 2023) advocates for using behavioural science as a lens to enhance policy and organisational outcomes by translating research into practical interventions that address real-world problems. It emphasises context sensitivity, ethical considerations, evidence-based approaches, and interdisciplinary collaboration. The manifesto focuses on scalable and sustainable systemic changes and highlights the importance of public engagement. By incorporating these principles, it aims to apply behavioural science practically, ethically, and impactfully to improve policy and organisational practices.

### *Interdisciplinarity and Cultural Evolutionary Thinking in Public Policy Design*

The emerging interdisciplinarity of behavioural science consulting is characterised by the integration of various disciplines, including psychology, economics, sociology, and anthropology. A significant trend within this field is the incorporation of cultural evolutionary thinking (Schimmelpfennig and Muthukrishna, 2023), which examines how cultural practices and norms evolve and influence behaviour over time. Key conceptual elements of this approach include cultural transmission, understanding how behaviours and norms are passed down through generations and across societies; social learning, examining how individuals learn from observing and imitating others; and group selection, analysing how behaviours that benefit groups, rather than just individuals, can evolve and persist.

**In public policy design, cultural evolutionary thinking provides a framework for creating policies that consider the dynamic nature of cultural practices and their impact on behaviour.** This approach emphasises long-term behavioural change by designing policies that promote sustainable behaviour changes over time. It recognises the importance of contextual sensitivity in shaping behaviour and advocates for adaptive policymaking that can evolve in response to changing cultural dynamics and behavioural patterns.

## *1.2 Human-Centered Behaviour Change Strategy*

**Human-centered design principles highlight the importance of understanding the needs, motivations, and preferences of target groups to drive meaningful behavioural change.** Human-centered behaviour change strategies are grounded in several foundational theoretical concepts from applied behavioural science.

Firstly, the integration of behavioural economics and cognitive psychology has enhanced our understanding of how individuals make decisions and how these decisions can be influenced. Concepts such as heuristics, biases, and framing effects are crucial in designing interventions that align with natural human tendencies.

Secondly, the role of social dynamics, as explored in social psychology, is pivotal. Social norms, peer influences, and group behaviours significantly impact individual actions, making it essential to consider the broader social context in any behaviour change strategy. The concept of choice architecture, which involves structuring choices in ways that lead to better outcomes without restricting freedom, is a practical application of these social dynamics.

### *Integrating Persuasive Design and Habit Formation*

The integration of insights from persuasive design (Cialdini, 1993) and B.J. Fogg's Tiny Habits (2020) has significantly shaped the field of behavioural design. Cialdini's principles, such as reciprocity, social proof, and scarcity, provide a robust framework for influencing human behaviour effectively. These principles are foundational in crafting strategies that resonate with individuals and promote desired behaviours through subtle and ethical means. The Tiny Habits Method underscores the power of small, incremental changes, suggesting that behaviour change is most sustainable when it starts with tiny, easily achievable actions that build momentum over time. This approach emphasises simplicity and immediacy, making it particularly effective in organisational contexts where gradual, scalable improvements are essential.

**The impact of integrating persuasive design and habit formation methods on behavioural design has been profound. This combined approach has led to more nuanced and effective behavioural interventions that are both theoretically sound and practically applicable.** It enables organisations to drive lasting change, improve decision making processes, enhance team performance, and foster a culture of continuous improvement. This holistic approach ensures that behaviour change is initiated and maintained, leading to transformative outcomes across all levels of an organisation.

### *Methodological Pluralism in Behavioural Design*

The advancement of behavioural design methods is being shaped by the development of structured frameworks blending behaviour change techniques with design methodologies.

By integrating insights from behavioural science and design, practitioners can utilise a diverse set of tools and methodologies to address specific behavioural challenges. **Methodological pluralism in behavioural design is key to develop interventions that are more effective, user-friendly, and engaging.** The iterative approach to behavioural design, which is based on feedback, continuous refinement and empirical evidence, ultimately leads to more impactful interventions driving meaningful behavioural change and positive outcomes.

### *Connecting Micro with Macro Perspectives*

In transforming complex organisational settings, behavioural design methods operate at multiple levels. At the individual level, strategies aim to foster personal growth and behavioural shifts through targeted interventions that address specific behaviours. For teams, the focus is on enhancing collaboration, communication, and collective efficacy. At the organisational level, the goal is to create an environment that supports and sustains desired behaviours, aligning organisational culture and policies with behavioural insights.

**The interaction between macro and micro perspectives is essential for the effectiveness of behavioural change interventions.** On the micro level, interventions often target individual behaviours, aiming to directly influence decision making and habits. For instance, green nudges are designed to promote environmentally friendly behaviours among individuals. However, the success of these targeted strategies can be greatly improved by framing the intervention at the macro level. By considering broader contextual factors and societal influences, such as social norms, cultural values, and policy frameworks, interventions can utilise macro-level dynamics to strengthen and magnify desired behavioural changes. Presenting green nudges within a broader narrative of environmental responsibility and collective action, for example, can enhance their acceptance and effectiveness among individuals (Grelle *et al.*, 2024). This incorporation of macro-level perspectives enriches the design and execution of behavioural change interventions, rendering them more comprehensive, impactful, and sustainable in achieving desired outcomes.

## 2. Behavioural Change Management

### *Inspiring Change: Behavioural Change Strategies and Organisational Mindsets*

**Recent findings underscore the pivotal role of behavioural science in driving the evolution of organisational mindsets.** Dweck's (2006) research on growth (versus fixed) mindsets revealed that individuals with a growth mindset are more likely to embrace challenges, persist through setbacks, and achieve higher performance. This mindset nurtures a culture of continuous improvement and innovation within organisations, encouraging adaptive and resilient behavioural patterns.

Building on Dweck’s work, Murphy (2024) explores how organisational environments can nurture growth mindsets. Murphy identifies key drivers of growth cultures, such as supportive leadership, inclusive practices, and development opportunities, demonstrating that these elements enhance employee engagement, collaboration, and collective success. By combining Dweck and Murphy's insights, leaders can promote growth mindsets at the individual level and embed cultures of growth organisation-wide, creating dynamic and productive workplaces. Moreover, connecting mindset theory with evolutionary theories of organisational development underscores the adaptability and

growth potential within institutions, providing profound insights for enhancing organisational effectiveness.

Barrah and Jordanov (2024) highlight the significant influence of cognitive biases, social dynamics, and environmental factors on business conduct. Their research underscores the importance of using behavioural science to craft evidence-based interventions that target the underlying psychological and social drivers of employee behaviour. This approach not only encourages desired behaviours and adaptability but also ensures enduring organisational change. Furthermore, Gibbons (2019) explores how behavioural science can be harnessed to inspire change within organisations at both team and organisational levels. He emphasises the role of behavioural science in empowering leaders to shape organisational dynamics effectively, driving sustainable change and improving overall performance. These findings collectively provide a robust foundation for developing impactful behavioural change strategies, highlighting the necessity of creating environments conducive to continuous learning and improvement

### *Heuristics and Biases Vs. Ecological Rationality in Organisational Decision Making*

In the sphere of organisational decision making, divergent views arise concerning the effectiveness of behavioural science tools and the essence of decision making processes. Johnson (2021) scrutinises the concepts of nudging and choice architecture in the elicitation of choices, acknowledging their potential to subtly shape decisions while also acknowledging their limitations, especially in organisational contexts. However, while nudges can aid decision making, they might not fully tackle the intricacies of complex organisations, Johnson argues.

Moore and Bazerman (2022) emphasise the need to cultivate systems and processes empowering employees to make informed choices. Central to their argument is the concept of nudging, subtly influencing decisions through adjustments in the decision environment. They endorse utilising nudging and setting defaults to improve decision making but also caution against regarding these interventions as universal solutions. While acknowledging the efficacy of nudging, they advise against excessive dependence on it, advocating instead for a comprehensive approach to developing decision making capabilities in organisational contexts.

In contrast, Kahneman *et al.* (2021) illuminate the detrimental impact of inconsistency, or "noise," in decision making. They illustrate how even seasoned professionals may exhibit varied decisions under similar conditions due to random variability, resulting in inefficiencies and errors. To counteract noise, they advocate for structured decision making processes, statistical tools, and clear guidelines to ensure consistency and minimise variability.

Todd and Gigerenzer (2007) and Gigerenzer *et al.* (2022) use the concept of ecological rationality, challenging the conventional perspective on decision making. They argue that heuristics, or mental shortcuts, are not inherently flawed but can be adaptive and effective in specific contexts. Gigerenzer stresses the importance of comprehending the ecological context in which decisions are made and and argues in favour of utilising simple heuristics tailored to specific environments. Although noise exists, it can be advantageous in some situations, advocating for a nuanced approach to decision making that considers context and complexity.

Gigerenzer's framework contrasts with the claims of Kahneman *et al.* (2021), who advocate for increased standardisation and reliance on algorithms to reduce variability.

They prioritise consistency and precision in decision making processes, unlike Gigerenzer's emphasis on the adaptive nature of heuristics.

In conclusion, the discussion surrounding decision making in organisations reflects varying viewpoints regarding the role of behavioural science tools, the influence of noise, and the nature of decision making processes. While some endorse nuanced approaches tailored to specific contexts, others stress standardisation and precision. Integrating these perspectives underscores the significance of a multifaceted approach to decision leadership, encompassing diverse viewpoints, structured processes to mitigate biases, and ethical nudging strategies, ultimately ensuring decisions align with organisational objectives.

### *Enhancing Team Performance*

Enhancing team performance through the application of behavioural science principles and methods requires a clear understanding of conceptual guideposts and theory landmarks. These serve as navigational tools, guiding organisations in effectively leveraging behavioural insights to optimise team dynamics and productivity. **At the core of this approach lies the recognition of human behaviour as influenced by a multitude of factors, including cognitive biases, social dynamics, and individual motivations.** Furthermore, behavioural design techniques offer practical strategies, such as implementing visual cues, to promote desired behaviours within teams. Understanding these underlying principles provides the foundation for designing interventions aimed at enhancing team performance. Concrete examples abound, such as improved collaboration through targeted communication strategies or enhanced productivity via structured goal-setting aligned with behavioural science principles.

As a conceptual framework to design behavioural strategies, the COM-B Model (Michie *et al.*, 2011; Michie *et al.*, 2014b) identifies capabilities, opportunities, and motivations as the key factors influencing behaviour. By addressing these elements, organisations can develop targeted interventions to foster desired behaviours within teams. For example, enhancing team capabilities through training and skill development programmes can improve performance, while creating opportunities for collaboration and innovation can promote engagement and productivity. Additionally, aligning tasks with individuals' intrinsic motivations can lead to increased engagement and performance.

It is important to adapt team-focused interventions to the specific context and culture of the organisation. What works in one setting may not necessarily be effective in another. Therefore, organisations must continuously evaluate and refine their strategies based on feedback and evolving organisational needs.

### *Using Behavioural Insights to Make Organisations More Equitable and Inclusive*

**Behavioural science offers powerful tools and insights for fostering equity and inclusiveness within organisations.** Organisations can use behavioural science to design inclusive policies and practices (Kepinski and Nielsen, 2021). Nudging techniques, such as structuring meetings to ensure all voices are heard or setting up mentorship programmes that encourage cross-departmental interactions, promote inclusive behaviour. Implementing strategies to mitigate unconscious biases in hiring, promotion, and evaluation processes, such as blind recruitment or standardised evaluation criteria, ensures fairness.

Pro-social behaviour, which includes actions such as cooperation, sharing, and helping, enhances social bonds and creates a supportive organisational culture. Insights from experimental research on the origins of pro-social behaviour and the role of reciprocity in economic behaviour, such as public good, ultimatum, and dictator games, can significantly benefit applied behavioural science consulting.

Insights on motivations and incentives from behavioural economic experiments reveal the role of perceived fairness in regard to how people respond to different resource distributions. The empirical results from research by Falk and Fischbacher (2006) and Fehr and Gächter (2000) indicate that individuals are willing to sacrifice personal gain to ensure fair outcomes, highlighting the importance of social preferences in economic behaviour. For example, public good games demonstrate that people are more likely to contribute to the collective good when fairness norms are reinforced, suggesting that organisations should design policies promoting transparency and fair resource distribution to foster a cooperative culture.

Reciprocal behaviour means responding to others' actions with similar actions, creating a sense of mutual obligation and cooperation. This behaviour builds trust and collaboration in teams. When employees perceive that their efforts are reciprocated, they are more likely to engage positively with their peers, contributing to a more cohesive and inclusive work environment. Reciprocal behaviour also mitigates feelings of unfairness and exclusion by ensuring all contributions are recognised and valued. Fostering reciprocal behaviour involves developing norms that encourage actions such as sharing credit for team achievements and providing constructive feedback. Tools and platforms that allow employees to acknowledge and reward each other's contributions strengthen reciprocal relationships and create a more inclusive culture.

Applied behavioural science consulting can leverage these insights to help organisations become more equitable and inclusive through various strategies. This includes conducting behavioural audits to identify areas where pro-social and reciprocal behaviours are lacking and where biases may be present, and gathering data on employee perceptions of equity and inclusion through surveys to tailor interventions effectively. Additionally, developing and delivering customised workshops focused on fostering pro-social and reciprocal behaviours, tailored to the organisation's specific context and needs, can be effective. Designing and implementing interventions such as default options that promote inclusive behaviour or feedback systems that encourage reciprocal interactions also play a crucial role.

## 3. Behavioural Innovation

*Borrowing Evolutionary Principles for a Behavioural Understanding of Innovation*

Understanding the dynamics of innovation from a behavioural science perspective requires grasping key psychological principles that illuminate how innovative behaviours can be nurtured at both the individual and organisational level. Cognitive biases, such as status quo bias (Samuelson and Zeckhauser, 1988) and confirmation bias (Kahneman, 2011), significantly affect decision making in innovation, hindering creative thinking. To overcome these biases calls for a culture of questioning norms and embracing diverse perspectives. Behavioural nudges, like setting innovation-friendly defaults and designing supportive environments, can further bolster innovation efforts.

Tatam (2022) explores how borrowing principles from evolutionary biology can unlock innovation dynamics. Nature-inspired designs, which mimic biological processes, offer

insights into breakthrough innovations, driving companies to become flexible and responsive to market changes. Tatam underscores evolution's preference for simplicity and efficiency, principles that businesses can adopt to streamline operations and products.

**Integrating evolutionary principles in behavioural science helps gain a deeper understanding of the behavioural foundations of innovation.** An adequate understanding of the intersection of the principles of psychology and evolution also provide the conceptual fundamentals for designing behavioural interventions in suport of innovation. The integrated use of insights from evolutionary principles and behavioural science can be harnessed for developing strategies to nurture a culture of behavioural innovation supporting the design of user-friendly products and the creation of adaptable organisations.

Overall, innovations considering human evolutionary traits, like the preference for social interactions and risk avoidance, are more adoptable. Making behavioural innovation with the blend of evolutionary principles and behavioural insights a core business of organisations will help to spread and scale innovative ideas within organisations and ultimately enhance business efficiency.

### *Behaviourally Informed Incentive Design and the Scalability of Innovative Ideas*

Behaviourally informed incentive design considers how real people make decisions, incorporating insights from behavioural economics to create incentives that genuinely motivate desired actions. Behaviourally informed incentives encourage adaptability among employees, enabling them to embrace new tasks and responsibilities. This adaptability is crucial for organisations to respond dynamically to new opportunities without losing efficiency in their core operations. Effective incentive designs promote a culture of risk-taking and experimentation, which is vital for exploring new opportunities. By reducing the fear of failure and encouraging innovative thinking, these incentives support continuous exploration. Behaviourally informed incentives ensure that employees remain motivated to innovate consistently, balancing current operational demands with the pursuit of new opportunities.

This approach is essential for scaling innovative ideas as it addresses the specifics of human behaviour, which can either facilitate or hinder the adoption of new initiatives. Enhancing the scalability of innovative ideas in organisations is critically dependent on behaviourally informed incentive design, as outlined in John List's "The Voltage Effect" (2022). List emphasises that the success of scaling innovative ideas often hinges on how well incentives are aligned with human behaviour to drive broader adoption effectively.

One of List’s critical concepts is "voltage drops," where the impact of an idea diminishes as it scales up. This often happens when incentives that worked in a small setting fail to resonate with a broader audience. Behaviourally informed incentives help mitigate this by ensuring that the motivations driving initial success are maintained or adapted effectively for larger groups. He points out that scalable ideas share certain characteristics, such as robust incentives that maintain their effectiveness as the idea scales. Avoiding false positives, i.e. early successes that do not hold up under broader implementation, requires thorough testing and adaptation of incentives to different contexts and populations.

Empirical evidence from List’s research shows that incentives must be deeply aligned with behavioural principles to avoid significant voltage drops. For example, monetary incentives, social recognition, and other behavioural nudges need to be tailored to maintain engagement and motivation as initiatives grow.

**In summary, the scalability of innovative ideas in organisations is heavily reliant on behaviourally informed incentive design.** By leveraging behavioural insights to craft effective incentives, organisations can better scale innovative ideas, ensuring that the motivations driving early successes are maintained and adapted for broader application. This approach supports sustained long-term innovation and competitiveness.

### *Psychological Safety as Key Enabling Factor for Behavioural Innovation*

Effective innovation requires creating a safe environment where employees feel empowered to take risks and share ideas without fear of judgment. These psychological principles provide a framework for enhancing behavioural innovation within organisations, guiding them to create environments that support and sustain innovative behaviours.

Psychological safety is paramount in organisations, enabling an environment where employees feel at ease expressing ideas, taking risks, and making mistakes without fear of negative repercussions. This sense of security encourages open communication, leading to improved decision making and problem-solving. It enhances learning and development by promoting growth from mistakes rather than punishment. Furthermore, it drives innovation by allowing employees to explore novel approaches without fear of criticism, improves team performance by cultivating trust and cooperation, and boosts employee engagement and retention by creating a committed and less turnover-prone workforce.

Several psychological principles underpin the enhancement of behavioural innovation within organisations. A growth mindset promotes the belief that abilities can be developed through dedication and hard work, supporting a culture of continuous learning and resilience. Cognitive diversity, which incorporates diverse perspectives and cognitive styles, leads to richer ideas and innovative thinking. Deci and Ryan's (1985) Self-Determination Theory emphasises intrinsic motivation, enhancing creativity through internal rewards and personal satisfaction. Edmondson's (2019) concept of psychological safety allows for interpersonal risk-taking without fear of negative consequences, a fundamental element for nurturing an innovative environment. Bandura's (1977) Self-Efficacy Theory proposes that a central psychological mechanism underpinning behaviour change is people's beliefs that they are capable of a specific change, which is an important driver of innovative behaviours within organisations.

**Behavioural innovation and psychological safety are deeply intertwined. Psychological safety is a critical enabler of behavioural innovation since it provides the foundation for risk-taking.** It encourages collaborative creativity by creating an environment where team members feel respected and valued, enhancing their willingness to share unique ideas. By allowing employees to learn from failures without fear, psychological safety views mistakes as growth opportunities rather than setbacks. It welcomes diverse perspectives by ensuring all voices are heard, promoting cognitive diversity, which is critical for generating a wide range of innovative ideas. Lastly, psychological safety cultivates a sustainable innovation culture by continuously encouraging creativity and experimentation, motivating employees to innovate as an ongoing part of their work culture.

### *Enhancing Organisational Ambidexterity*

Organisational ambidexterity is the ability to exploit existing competencies while exploring new opportunities (O'Reilly and Tushman, 2021). Behavioural innovation instils a risk-taking mindset, encouraging calculated risks as part of the innovation process. It hinges on organisational adaptiveness and continuous learning. Since it supports the necessary

unlearning of obsolete practices while fostering the acquisition of new skills, it is vital for shifting between exploitative and explorative activities.

Agile leadership, capable of managing current operations while steering towards new opportunities, is crucial for engaging employees with diverse mindsets in both exploitative and explorative activities. Leadership and management practices that empower teams, encourage autonomy, and instil a sense of ownership also benefit from behavioural innovation.

By breaking down silos through collaboration across departments and functions, behavioural innovation is vital for reconfiguring and redeploying resources efficiently, balancing exploitation and exploration effectively. Implementing dynamic capabilities also relies on behavioural innovation. It enhances an organisation's ability to respond to market opportunities, contributing to enhancing ambidextrous organisational structures.

Finally, sustaining long-term competitiveness is underpinned by behavioural innovation. It nurtures an organisational mindset of continuous improvement, refining current operations while driving changes that can transform organisations.

**In summary, behavioural innovation is critical for enhancing organisational ambidexterity.** It provides the adaptability, cultural flexibility, leadership agility, collaborative spirit, and dynamic capabilities needed to balance exploitation and exploration. Without fostering innovative behaviours and mindsets, organisations may struggle to achieve the dual capabilities required for ambidexterity, impacting their ability to remain competitive and responsive in a rapidly changing business environment.

## 4. Pro-Environmental Behaviour Change

*Combining Environmental Psychology and Behavioural Design*

**The integration of environmental psychology and behavioural design offers a robust approach to drive pro-environmental behaviour change.** Rooted in a rich tapestry of theories, methods, and techniques from both disciplines, this combination empowers applied behavioural science consulting to lead sustainable transformations within organisations. Furthermore, this blend represents a leap beyond conventional nudge theory and choice architecture, offering a holistic approach that taps into deeper psychological frameworks and practical techniques to drive lasting change.

Environmental psychology theories, such as Restorative Environments Theory (Kaplan, 1985; Kaplan and Kaplan, 1989), highlight nature's role in cognitive restoration, while Place Attachment Theory (Lewicka, 2011) explores the emotional bonds with the environment that shape conservation behaviours. Environmental Self-Identity Theory (Van der Werff *et al.*, 2013) further illuminates how individuals perceive themselves in relation to their environment, influencing their environmental actions.

In tandem, behavioural design principles like nudging gently steer individuals towards desired behaviours, while modifications in choice architectures design environments to make pro-environmental choices more appealing. Leveraging social proof (Cialdini, 2001) amplifies this influence by showcasing others' pro-environmental actions.

Practical methods and techniques enhance this approach. Environmental audits identify opportunities for interventions, while behavioural mapping uncovers triggers and barriers to pro-environmental actions. Co-creation workshops engage stakeholders in crafting

tailored interventions, and behavioural trials test effectiveness before widespread implementation.

Specific concepts such as normative messaging, feedback loops, and defaults and incentives also play pivotal roles. Normative messaging communicates the commonality and desirability of pro-environmental behaviours, while feedback loops provide real-time data for behaviour modification. Defaults and incentives nudge individuals towards environmentally friendly choices and reinforce pro-environmental behaviours.

Incorporating these elements into applied behavioural science consulting, this approach includes environmental assessments to identify opportunities and behavioural bottlenecks, behavioural insights workshops to craft tailored interventions, pilot programmes to test efficacy, and ongoing evaluation and optimisation. As a consultancy approach it is particularly relevant for corporate entities aiming to embed sustainability into their operations, public sector agencies fostering environmental stewardship, and educational institutions cultivating eco-conscious behaviours among their communities.

By melding environmental psychology and behavioural design, this approach can ignite meaningful pro-environmental behaviour change. Through theory-guided interventions and evidence-based practices, it paves the way for sustainable transformations that benefit both organisations and the environment.

### *Behavioural Decision Theory and Environmental Decision Making*

Behavioural Decision Theory (BDT) and Environmental Decision Making (EDM) are closely intertwined fields that provide essential insights for applied behavioural science consulting, particularly in advancing pro-environmental behaviours within organisations and society. This connection stems from comprehending how individuals make decisions and how their choices can be influenced to promote sustainable practices. The amalgamation of BDT and EDM forms a robust framework for applied behavioural science consulting, facilitating the creation of interventions that effectively guide behaviours towards sustainability.

BDT delves into the psychological processes underpinning decision making, revealing that individuals often diverge from rational choice models due to cognitive biases, heuristics, and emotions. Key concepts include Prospect Theory (Kahneman and Tversky, 1979), which elucidates how people perceive gains and losses, with a focus on loss aversion and the framing effect. Heuristics and biases shed light on mental shortcuts and systematic errors that influence decision making, such as the availability heuristic (Tversky and Kahneman, 1973) and confirmation bias (Kahneman, 2011). Temporal discounting (Ainslie, 2015) explains the inclination to prioritise immediate rewards over future benefits, particularly relevant in environmental decisions with long-term implications. These elements serve as the foundation of environmental decision making.

EDM focuses on the choices individuals and organisations make concerning the environment. It integrates insights from BDT to understand and influence pro-environmental behaviours. Key concepts include the Value-Belief-Norm Theory (Stern *et al.*, 1999), suggesting that individuals' environmental behaviours are shaped by their values, beliefs, and perceived social norms. The Theory of Planned Behaviour (Ajzen, 1991) underscores the significance of attitudes, subjective norms, and perceived behavioural control in shaping environmental intentions and actions. Social Practice Theory (Hargreaves, 2011) examines how everyday practices and social norms shape environmental behaviours.

At the organisational level, this relationship is crucial for tailoring interventions to different segments of employees based on department, role, and tenure. Departmental segmentation involves recognising varying environmental impacts and motivations across departments. For instance, operations might prioritise energy efficiency, while marketing could focus on promoting green products. Role-based interventions acknowledge that employees in different roles possess unique responsibilities and decision making powers. Executives may respond to interventions emphasising cost savings and regulatory compliance, while frontline workers might be motivated by immediate, tangible benefits such as a healthier work environment. Tenure considerations recognise that new employees may be more open to adopting pro-environmental practices during onboarding, while long-tenured employees might require interventions emphasising the evolution of organisational values and the cumulative impact of sustained environmental efforts.

At the societal level, integrating BDT and EDM is vital for designing large-scale interventions that guide public behaviour towards sustainability. Normative messaging leverages social norms to underscore the prevalence of pro-environmental behaviours. Campaigns highlighting widespread recycling practices can influence individuals to conform to perceived societal standards. Feedback mechanisms provide real-time feedback on energy consumption or waste generation to prompt individuals to adjust their behaviours, tapping into feedback loops from BDT.

The scientific relationship between BDT and EDM is critical for applied behavioural science consulting aimed at promoting pro-environmental behaviour. Understanding the cognitive processes shaping decision making and the social and environmental factors influencing behaviour are fundamental for designing targeted, effective interventions that foster sustainable practices across organisational and societal levels.

### *Employee Green Behaviours*

Embedding pro-environmental change in large and complex organisations demands a comprehensive approach that utilises the methodologies and frameworks of applied behavioural science consulting. By integrating insights from behavioural economics, environmental psychology, and the science of motivation, organisations can shape and influence employee behaviours towards pro-environmental practices. The following aspects provide fundamental guideposts on how this can be achieved:

**Understanding Employee Behaviour:** The initial step in promoting pro-environmental behaviours involves comprehending the factors influencing employee behaviour. Applied behavioural science consulting relies on empirical research and data analysis to identify behavioural patterns, cognitive biases, and motivational drivers within different segments of the workforce. Relevant literature includes insights from behavioural economics, such as nudge theory and choice architecture, which provide strategies for designing interventions that encourage environmentally friendly choices without impinging on individual freedom. Research by Thaler and Sunstein (2008) on Nudging and Kahneman and Tversky (1979) on Prospect Theory form the foundation in this area. Environmental psychology offers valuable perspectives on the psychological factors influencing environmental behaviours, drawing from concepts such as Place Attachment Theory (Lewicka, 2011), Environmental Self-Identity Theory (Van der Werff *et al.*, 2013), and Restorative Environments Theory (Kaplan, 1985; Kaplan and Kaplan, 1989).

**Enhancing Intrinsic Motivation:** Understanding employee motivations is crucial for designing interventions that resonate with both intrinsic and extrinsic drivers. Organisations should focus not only on extrinsic incentives but also on enhancing employees' intrinsic motivation towards pro-environmental behaviours. This involves

creating a supportive organisational culture that values sustainability, promotes ethical leadership, and provides opportunities for skill development and personal growth. Insights from Self-Determination Theory, as developed by Deci and Ryan (1985), suggests that individuals are motivated when their basic psychological needs for autonomy, competence, and relatedness are met. This theory provides a robust framework for understanding how intrinsic motivation can be fostered in the workplace. Complementing this, Pink's (2009) research on the importance of autonomy, mastery, and purpose in motivating behaviour offers additional theoretical foundations for enhancing intrinsic motivation.

**Designing Interventions:** Armed with insights from behavioural science, organisations can design interventions tailored to different segments of employees. These interventions should be evidence-based, targeted, and aligned with the organisation's sustainability objectives. Examples of effective interventions include behavioural nudges, such as changing default settings or providing social norms feedback, to influence employee behaviour towards pro-environmental choices. Engaging employees in sustainability initiatives through education, training, and participatory decision making processes can foster a sense of ownership and commitment to environmental goals. Co-creation workshops and sustainability committees provide opportunities for employees to contribute ideas and solutions, enhancing their sense of autonomy and competence. Offering rewards, recognition, or incentives for adopting green behaviours can provide tangible benefits and reinforce desired behaviours. However, it is essential to design incentive programs that are aligned with employees' values and preferences to ensure long-term sustainability. Research by Gneezy and Rustichini (2000) on incentives and behavioural change offers valuable insights into designing effective incentive schemes.

**In summary, embedding pro-environmental change in large and complex organisations necessitates a systematic approach that draws from behavioural economics, environmental psychology, and the science of motivation.** By understanding employee behaviour, designing targeted interventions, and enhancing intrinsic motivation, applied behavioural science consulting can facilitate the shift towards sustainable practices and contribute to long-term environmental impact and organisational success.

# 5. Behavioural Public Policy Design

### *Behavioural Science in Policy Formulation: Beyond Nudging and Choice Architecture*

Behavioural Public Policy (BPP) is an inductive approach to policymaking that utilises empirical evidence from behavioural science, including behavioural economics, cognitive psychology, and social psychology (Reisch and Sunstein, 2023). Its aim is to comprehend and anticipate how people make decisions by focusing on bounded rationality and acknowledging the impact of cognitive limitations and contextual factors. BPP relies on insights into human behaviour, such as heuristics and biases, to formulate policies that enhance welfare across various domains. This method employs tools like nudges and choice architecture to facilitate better decision making, aiming to develop effective and widely accepted programmes. However, applying BPP requires careful consideration of context and adherence to ethical standards to ensure its efficacy and ethicality.

BPP encompasses several core components rooted in the concept of bounded rationality. Nudging, as popularised by Thaler and Sunstein (2008), involves making subtle adjustments in the environment to influence behaviour without impinging on freedom of

choice, such as placing healthier food options at eye level. Another key component is choice architecture, which involves structuring decision contexts to promote better outcomes, using strategies like default settings. Behavioural insights, drawing on empirical research, focus on cognitive biases and heuristics that shape decision making, emphasising the importance of understanding how real people behave, rather than idealised rational actors.

The concept of bounded rationality, introduced by Herbert Simon (1955), recognises that individuals are not fully rational due to cognitive limitations, limited information, and time constraints. This understanding is crucial for designing effective public policies and has significant implications for policy formulation. These implications include simplifying decision contexts to reduce complexity and cognitive load, tailoring interventions to meet the diverse cognitive capacities and informational needs of different demographic groups, designing robust policies resilient to deviations from rational decision making, and providing timely feedback mechanisms to aid individuals in adjusting their behaviour.

While nudging and choice architecture are essential tools in BPP, the approach extends beyond these techniques. It integrates a profound understanding of human psychology, acknowledging that individuals may not always act in their own best interest due to biases like present bias, overconfidence, and loss aversion. Policies can be designed to accommodate loss aversion by framing benefits as avoiding losses rather than achieving gains. In conclusion, behavioural science in policy formulation transcends simple nudging and choice architecture by deeply incorporating the concept of bounded rationality. By understanding and addressing the cognitive limitations and biases of "humans" rather than "econs," policymakers can devise more effective interventions, leading to policies that not only influence behaviour more successfully but also empower individuals to make better choices, ultimately resulting in more sustainable and impactful outcomes.

### *Choice Infrastructure: A Deviation from the Fist Wave of Behavioural Public Policy*

In a recent article, Schmidt (2022) advocates for an expanded approach to behavioural public policy that transcends traditional choice architecture. She introduces the concept of "choice infrastructure," which encompasses the systems, processes, and contexts shaping decision making environments at a macro level. Schmidt criticises choice architecture for oversimplifying decision making complexities and stresses the importance of considering regulatory frameworks, cultural norms, and institutional practices to support and sustain effective decision making processes.

Schmidt argues that contemporary behavioural public policy should focus on developing robust choice infrastructures rather than relying on simple nudges. This involves designing policies that consider broader decision making contexts, ensuring they are sustainable, equitable, and adaptable. In contrast with the first wave of behavioural public policy design underpinned by the centrality of the concept of choice architecture that focused on small-scale interventions targeting individual choices, Schmidt calls for a paradigm shift in behavioural public policy from individual nudges to a comprehensive approach considering choice infrastructure. She advocates for addressing systemic factors and institutional contexts to achieve long-term behavioural change and social justice. Unlike Thaler, Sunstein, and Reisch, who concentrate on individual-level interventions within existing systems, Schmidt advocates for systemic changes to modify the choice infrastructure itself. She also stresses the need for flexible, context-sensitive interventions that can evolve over time, providing a comprehensive framework for lasting behavioural change that contrasts with the static nature of early behavioural interventions.

### *The I-Frame vs. S-Frame Agenda for Behavioural Public Policy*

In a recent paper, Loewenstein and Chater (2022) suggest that behavioural public policies have primarily focused on individual behaviours (the i-frame), overlooking larger systemic issues that could be addressed through broader changes (the s-frame). They propose shifting the focus to systemic changes, which can create more significant and long-lasting effects by altering the overall decision-making environment.

Proponents of the s-frame argue that systemic changes lead to comprehensive and enduring solutions, influencing a wider population and fostering desired behaviours without continuous individual interventions. The s-frame addresses root causes, such as socioeconomic factors and institutional structures, leading to more equitable and inclusive policy outcomes. Additionally, structural changes are seen as scalable and efficient, with the potential to create significant societal shifts without repeated interventions.

Critics, however, argue that the s-frame may undermine individual autonomy by imposing top-down changes that limit personal freedom. They highlight the complexity and feasibility challenges of implementing systemic changes, which require significant political will, resources, and time. Furthermore, the i-frame allows for more targeted and specific interventions, enabling policymakers to design nuanced strategies tailored to particular contexts and populations.

Loewenstein and Chater's paper has sparked a debate on the optimal focus for behavioural public policies. While the s-frame offers a promising avenue for addressing systemic issues and achieving broader societal impact, the practicality and ethical considerations remain contentious. Balancing the strengths of both frames may provide a more holistic and effective strategy for behavioural policy design, leveraging individual-level interventions while pursuing necessary structural reforms.

### *Leveraging Reciprocity in Behavioural Public Policy*

Behavioural science has emerged as a potent tool for informing public policy, providing insights into human behaviour that can assist policymakers in crafting more effective interventions. Among the various principles of behavioural science, reciprocity stands out as a fundamental concept with significant implications for policy design.

Reciprocity represents a social phenomenon that mirrors individuals' inclination to respond to acts of kindness or favours received from others by reciprocating in a similar manner. This principle underscores the importance of mutual exchange and cooperation in human interactions. Sugden (2019) emphasises that this concept is deeply ingrained in human nature and plays a pivotal role in shaping social relationships and norms.

Within the domain of public policy, reciprocity offers a potent mechanism for influencing behaviour and fostering cooperation among citizens. Oliver (2019) has illustrated how policymakers can utilise reciprocity to devise interventions that promote pro-social behaviour and civic engagement. By providing incentives or rewards for desirable actions, such as volunteering or charitable donations, policymakers can tap into individuals' innate inclination to reciprocate kindness and encourage them to contribute positively to society.

Reciprocity can be applied across various spheres of public policy, spanning from healthcare to environmental conservation. In healthcare, policymakers can employ reciprocity to promote adherence to treatment regimens by offering incentives or rewards for patients who comply with prescribed medications or attend appointments. Similarly, in environmental policy, governments can incentivise sustainable behaviour by acknowledging and rewarding individuals who adopt eco-friendly practices.

While reciprocity offers promising prospects for policy design, it also presents ethical considerations and challenges. Policymakers must ensure that reciprocal interventions are ethically and transparently implemented, avoiding manipulative or coercive tactics. Additionally, there exists a risk of unintended consequences, such as the potential for reciprocal incentives to diminish intrinsic motivations or exacerbate societal inequalities. Thus, policymakers must carefully assess the benefits and risks of employing reciprocity in policy design.

Reciprocity holds significant relevance for the development of behavioural public policy, furnishing policymakers with a powerful instrument for influencing behaviour and fostering cooperation among citizens. By comprehending and harnessing the principles of reciprocity, policymakers can craft interventions that foster pro-social behaviour, elevate civic engagement, and ultimately contribute to societal well-being. However, the ethical considerations and challenges associated with reciprocity underscore the necessity for deliberation and responsible implementation in policy design and execution.

# 6. Cross-Thematic Issues in Behavioural Intervention Design

### *Behaviourally Informed KPIs*

Behaviourally informed Key Performance Indicators (KPIs) are crucial for evaluating the effectiveness of behavioural interventions. Unlike traditional KPIs, which may focus solely on outcomes, behaviourally informed KPIs delve deeper into behavioural metrics such as engagement, adherence, and behavioural shifts. By incorporating these metrics, stakeholders can gain a comprehensive understanding of intervention impact and make data-driven decisions.

### *The COM-B Model and Behaviour Change Wheel*

The COM-B Model, comprising Capability, Opportunity, and Motivation, serves as the foundation of the Behaviour Change Wheel (BCW). This framework enables systematic intervention design by identifying intervention functions and policy categories aligned with specific behavioural determinants. By leveraging the COM-B Model and BCW, practitioners can develop targeted interventions tailored to address the underlying drivers of behaviour change effectively.

### *Habit Formation Techniques*

Habit formation is a critical aspect of behaviour change, yet it is often overlooked in intervention design. Habit formation techniques leverage behavioural science principles to cultivate desired habits systematically. Strategies such as implementation intentions, habit stacking, and context priming can promote habit formation and sustain behavioural change over time. Incorporating these techniques into intervention design enhances long-term effectiveness and sustainability.

### *Behavioural Journey Mapping*

Behavioural journey mapping is a methodological approach that elucidates the steps individuals take when engaging in a particular behaviour. By mapping the behavioural journey, practitioners gain insights into critical decision points, barriers, and facilitators

influencing behaviour. This information informs the design of targeted interventions that address specific behavioural bottlenecks and leverage opportunities for behaviour change effectively.

### *Effectiveness of Behavioural Intervention Design*

The effectiveness of behavioural intervention design depends on several factors, including intervention fidelity, scalability, and adaptability. Fidelity ensures interventions are implemented as intended, while scalability enables interventions to reach a broader audience. Additionally, interventions must be adaptable to diverse contexts and populations to maximise impact. Rigorous evaluation methodologies, such as randomised controlled trials and quasi-experimental designs, are essential for assessing intervention effectiveness and informing iterative refinement.

### *Enhancing Nudging Acceptance: The Role of Framing*

Nudges, subtle changes in the choice architecture designed to influence behaviour, have gained prominence in behavioural intervention design. However, nudges must be framed appropriately to enhance acceptance and efficacy. Framing techniques, such as positive framing, social norms, and salience, influence individuals' perception and response to nudges. By employing strategic framing strategies, practitioners can increase the likelihood of nudges being embraced and yielding desired behavioural outcomes.

### *Ethical Challenges in Behavioural Intervention Design*

Transparency, accountability, and ongoing ethical review processes are essential for addressing ethical concerns and upholding ethical standards in behavioural intervention design. Potential ethical challenges include issues of autonomy, informed consent, and manipulation. Practitioners must navigate these challenges carefully, prioritising respect for individuals' autonomy and well-being. Ethical governance of nudging is crucial to guarantee that its impact benefits individuals and society without unintended consequences. This entails adopting transparent and participatory processes in designing behavioural public policy interventions. Tools like the OECD BASIC Toolkit (OECD, 2019) assist in this process, ensuring rigorous assessment and implementation of behavioural policies.

Contextual nuances need to be taken into account, as what proves effective in one community may not in another. For instance, while leveraging social norms can be effective in some cultures, its efficacy may vary elsewhere. To address potential variations and unintended outcomes, planned behavioural policies should undergo systematic testing through restricted trials. This ensures that interventions are ethically sound, effective, and aligned with the values of the communities they serve.

To create successful behavioural interventions in different sectors and domains, it is vital for practitioners to include ethical considerations in their designs. This ensures they uphold ethics and achieve positive impacts on society.

# 7. Conclusion

*Understanding the Core Business of Applied Behavioural Science Consulting*

Behavioural science consulting revolves around comprehending human behaviour and utilising this comprehension to instigate positive transformations across diverse fields. At its core, behavioural science consulting entails the application of scientific principles and empirical evidence to tackle behavioural obstacles and foster behavioural alterations. Drawing insights from fields like psychology, economics, and neuroscience, behavioural science consultants offer invaluable expertise in identifying behavioural issues, crafting bespoke interventions, and assessing their efficacy. Ultimately, the objective is to assist individuals, organisations, and policymakers in realising their objectives by influencing behaviour in desirable directions.

*Translating Behavioural Scientific Insights into Actionable Guidance*

The process of turning behavioural scientific insights into actionable advice entails a systematic and iterative approach. It commences with a thorough analysis of the issue at hand, encompassing the identification of behavioural impediments and motivators. Applied behavioural science consulting then leverages pertinent theories and empirical data to formulate intervention strategies tailored to specific contexts and objectives. These strategies undergo testing and refinement through pilot studies or experiments to validate their effectiveness and feasibility. Subsequently, actionable recommendations are developed, accompanied by implementation plans and monitoring mechanisms to track progress and make necessary adjustments.

In summary, applied behavioural science consulting offers a potent methodology for addressing behavioural challenges and driving constructive change, both at the micro and macro level. By harnessing scientific principles and empirical evidence, consultants assist clients in comprehending, influencing, and altering behaviour in ways that support their aspirations. Whether addressing individual behaviour modification, organisational evolution, or policy formulation, applied behavioural science consultancy plays a pivotal role in navigating the intricacies of human behaviour and attaining meaningful outcomes for clients.

*The Benefits of Hiring a Behavioural Science Consultant*

Enlisting the services of an applied behavioural science consultancy presents numerous advantages. Primarily, consultants bring specialised knowledge and expertise in comprehending human behaviour, enabling them to offer distinctive insights into intricate behavioural dilemmas. Furthermore, consultants employ rigorous scientific methodologies to accurately diagnose issues and devise evidence-based interventions with higher probabilities of success. Additionally, consultants offer an external viewpoint, providing impartial recommendations and innovative ideas that internal stakeholders may overlook. Ultimately, by collaborating with an external behavioural science consultant, organisations can refine their decision leadership and instigate sustainable behavioural transformations.

# 8. References


Ainslie, G. (2015), The cardinal anomalies that led to behavioral economics: cognitive or motivational?, *Managerial and Decision Economics*, 37 (4–5): 261–273.

Ajzen, I. (1991), The Theory of Planned Behaviour, *Organisational Behaviour in Human Decision Processes*, 50 (1991), 179-211.

Bandura, A. (1977), Self-efficacy: Toward a unifying theory of behavioural change, *Psychological Review*, 84 (1977), 191-215.

Barrah, B. B. and P. Jordanov (2024), *The Dynamics of Business Behavior. An Evidence-Based Approach to Managing Organizational Change*, Hoboken, NJ. Wiley

Bucher, A. (2020), *Engaged. Designing for Behavior Change*, New York, NY: Rosenfeld

Christensen, C. C. (2016), *Competing Against Luck. The Story of Innovation and Customer Choice*, Harper Collins

Cialdini, R. B. (1993), *Influence. Science and Practice*, Harper Collins Publishers

Cialdini, R. B. (2001), Harnessing the science of persuasion, *Harvard Business Review*, 79 (9), 72–79.

Deci, E. L. and R. M. Ryan (1985), *Intrinsic Motivation and Self-Determination in Human Behavior*, New York, NY: Plenum Publishing

Duhigg, C. (2012). *The Power of Habit: Why We Do What We Do in Life and Business*, Random House

Duke, A. (2022), *Quit. The Power of Knowing When to Walk Away*, London: Ebury

Dweck, C. (2006), *Mindset. The New Psychology of Success*, New York, NY: Random House

Edmondson, A. (2019), *The Fearless Organization. Creating Psychological Safety in the Workplace for Learning, Innovation, and Growth*, Hoboken, NJ: Wiley

Falk, A. and U. Fischbacher (2006), A theory of reciprocity, *Games and Economic Behavior*, 54 (2006), 293-315.

Falk, A. (2022), *Warum es so schwer ist, ein guter Mensch zu sein ... und wie wir das ändern können: Antworten eines Verhaltensökonomen*, München: Siedler Verlag

Fehr, E. and S. Gächter (2000), Fairness and retaliation: The economics of reciprocity, *The Journal of Economic Perspectives*, 14(3), 159-181.

Fishbach, A. (2022), *Get It Done. Surprising Lessons From the Science of Motivation*, New York, NY: Little, Brown Spark

Fogg, B. J. (2020), *Tiny Habits. Why Starting Small Makes Lasting Change Easy*, London: Penguin

Gibbons, P. (2019), *The Science of Organizational Change. How Leaders Set Strategy, Change Behavior and Create an Agile Culture*, Phronesis Media

Gibbons, P. and T. Kennedy (eds.) (2024), *The Future of Change Management (Vol. 1). Collected Essays from Leading Thinkers and Practitioners*, Phronesis Media

Gigerenzer, G., J. Reb and S. Luan (2022), Smart heuristics for individuals, teams, and organizations, *Annual Review of Organizational Psychology and Organizational Behavior*, 9 (2022), 171-198.

Gneezy, U. and A. Rustichini (2000), Pay enough or don't pay at all, *The Quarterly Journal of Economics*, 115(3), 791–810.

Grelle, S., S. Kuhn, H. Fuhrmann-Riebel and W. Hofmann (2024), The role of framing and effort in green nudging acceptance, *Behavioural Public Policy*, (2024), 1-16.

Hallsworth, M. (2023), A manifesto for applying behavioural science, *Nature Human Behaviour*, 7 (2023), 310–322.

Hallsworth, M. and E. Kirkman (2020), *Behavioral Insights*, Cambridge, MA: The MIT Press

Hargreaves, T. (2011), Practice-ing behaviour change: Applying social practice theory to pro-environmental behaviour change, *Journal of Consumer Culture*, 11 (1), 79–99.

Johnson, E. (2021), *The Elements of Choice. Why the Way We Decide Matters*, New York, NY: Riverhead Books

Kaplan, S. (1985), The restorative benefits of nature: Towards an integrated framework, *Journal of Environmental Psychology*, 15 (1985), 169-182.

Kaplan, R. and S. Kaplan (1989), *The Experience of Nature. A Psychological Perspective*, New York, NY: Cambdrige University Press

Kepinski, L. and T. C. Nielsen (2021), *Inclusion Nudges Guidebook. 100 Practical Actions*, Independently published

Kahneman, D. and A. Tversky (1979), Prospect Theory: An analysis of decision under risk, *Econometrica*, 47(2), 263-291.

Kahneman, D. (2011), *Thinking, Fast and Slow*, New York, NY: Farrar, Strauss and Giroux

Kahneman, D., O. Sibony and C. R. Sunstein (2021), *Noise. A Flaw in Human Judgement*, New York, NY: Little, Brown Spark

Khan, Z. and L. Newman (eds.) (2021), *Building Behavioral Science in an Organization*, Action Design Press

Lewicka, M. (2011), Place attachment: How far have we come in the last 40 years?, *Journal of Environmental Psychology*, 31 (2011), 207-230.

List, J. (2022), *The Voltage Effect. How to Make Good Ideas Great and Great Ideas Scale*, New York, NY: Currency

Mažar, N. and D. Soman (eds.) (2022), *Behavioral Science in the Wild*, Toronto: University of Toronto Press

Michie, S., M. M. van Stralen and R. West (2011). The behaviour change wheel: A new method for characterising and designing behaviour change interventions. *Implementation Science*, 6, 42.

Michie, S., R. Campbell, J. Brown, R. West and H. Gainforth (2014a), *The ABC of Behaviour Change Theories*, Silverback Publishing

Michie, S., L. Atkins and R. West (2014b), *The Behaviour Change Wheel. A Guide To Designing Interventions*, Silverback Publishing

Milkman, K. (2021), *How to Change. The Science of Getting from Where You Are to Where You Want to Be*, London: Vermilion

Moore, D. A. and M. H. Bazerman (2022), *Decision Leadership. Empowering Others to Make Better Choices*, London: Yale University Press

Murphy, M. C. (2024), *Cultures of Growth. How the New Science of Mindset Can Transform Individuals, Teams, and Organizations*, New York, NY: Simon & Schuster

OECD (2019), *Tools and Ethics for Applied Behavioural Insights. The BASIC Toolkit*, Paris: OECD Publishing

Oliver, A. (2019), *Reciprocity and the Art of Behavioural Public Policy*, Cambridge: Cambridge University Press

O'Reilly, C. A. and M. L. Tushman (2021), *Lead and Disrupt. How to Solve the Innovator's Dilemma*, Stanford, CA: Stanford University Press

Pink, D. (2009), *Drive. The Surprising Thruth About What Motivates Us*, New York, NY: Riverhead Books

Reisch, L. and C. R. Sunstein (2023), Behavioural Public Policy, in: M. van Gerven *et al.* (eds.), *Encyclopedia of Public Policy*, Springer Nature

Soman, D. and C. Yeung (eds.) (2021), *The Behaviorally Informed Organization*, Toronto: University of Toronto Press

Steg, L. and J. I. de Groot (eds.) (2019), *Environmental Psychology. An Introduction*, Hoboken, NJ: Wiley

Samuelson, W. and R. Zeckhauser (1988), Status quo bias in decision making, *Journal of Risk and Uncertainty*,1, 7–59.

Schimmelpfennig, R. and M. Muthukrishna (2023), Cultural evolutionary behavioural science in public policy, *Behavioural Public Policy,* (2023), 1–31

Schmidt, R. (2022), A model for choice infrastructure: Looking beyond choice architecture in Behavioural Public Policy, *Behavioural Public Policy*, (2022), 1-26.

Simon, H. A. (1955), A behavioral model of rational choice. *Quarterly Journal of Economics*, 69 (1955), 99-118.

Stern, P. C., T. Dietz T., T. Abel, G. A. Guagnano and L. Kalof (1999), A Value-Belief-Norm Theory of Support for Social Movements: The case of environmentalism. *Human Ecology Review*, 6 (1999), 81-97.

Sugden, R. (2019), *The Community of Advantage. A Behavioural Defence of the Liberal Tradition of Economics*, Oxford: Oxford University Press

Sutter, M. (2023), *Behavioral Economics for Leaders. Research-Based Insights on the Weird, Irrational, and Wonderful Ways Humans Navigate the Workplace*, Hoboken, NJ: Wiley

Tatam, S. 2022), *Evolutionary Ideas. Unlocking Ancient Innovation to Solve Tomorrow's Challenges*, Hampshire: Harriman House

Thaler, R. and C. Sunstein (2008), *Nudge. Improving Decisions About Health, Wealth, and Happiness*, Yale University Press

Todd, P.M. and G. Gigerenzer (2007), Environments that make us smart: Ecological rationality, *Current Directions in Psychological Science*, 16(3), 167–171.

Tversky, A. and D. Kahneman (1973), Availability: A heuristic for judging frequency and probability. *Cognitive Psychology*, 5 (2), 207–232.

Van der Werff, E., L. Steg and K. Keizer (2013), The value of environmental self-identity: The relationship between biospheric values, environmental self-identity and environmental preferences, intentions and behaviour, *Journal of Environmental Psychology*, 34 (2013), 55-63.

Wendel, S. (2020), *Designing for Behavior Change. Applying Psychology and Behavioral Economics*, Sebastopol, CA: O'Reilly