

Editorial

Nudging and Choice Architecture: Perspectives and Challenges



Nudging e Arquitetura da Escolha: Perspetivas e Desafios

Cristiana Cerqueira Leal^{*1}

Ines Branco-Illodo²

Benilde M. do Nascimento Oliveira³

Luisa Esteban-Salvador⁴

INTRODUCTION

The architecture of choice is present in everyday life, and the ways in which decisions are made have become increasingly complex. This special issue responds to the need to explore the complexities of nudging and choice architecture in the current environment. Decisions can be decomposed into a diverse and intricate process of decision-making. Individuals are required to navigate in successive frames of choice and optimize their decisions, while facing limitations of time, information, and brainpower to process options of choice and come out with a decision. For instance, we make over 200 food-related decisions a day (Wansink & Sobal, 2007). Some of these decisions are deliberate and thoughtful, but the vast majority is made through a very short conscious period of liberation, automatically, using rules of thumb or as a habit. In fact, 45% of daily behaviors are out of habit and tend to be repeated in similar contexts (Neal, Wood, & Quinn, 2006). Habits are shortcuts that do not guarantee the best decision every time, but that may work quite well for triggering a fast response, which means that

either good or bad habits tend to be repeated. Cumulative choices have consequences, and they interact and influence subsequent decisions that tend to be repeated over time.

The way in which options are presented and framed impacts the course of the decision-making process and, consequently, the elections made. Thus, choices can be positively altered by changing the choice architecture through nudges, driving real and lasting behavioral change. For example, while people want to eat healthier, exercise more, adopt a more sustainable behavior, be more organized and productive, save more and invest better, they keep acting contrary to their intentions, even when they know exactly how they should behave to reach their goals. Likewise, rather than lack of knowledge about making decisions such as healthier choices, people maintain poor patterns of choice instead of their intentions and interests due to ingrained habits, easy and unconscious acting, and postponement of better behavior. In these situations,

* Corresponding Author.

1. Universidade do Minho, Escola de Economia e Gestão, Núcleo de Investigação em Políticas Económicas e Empresariais, Braga, Portugal.

2. University of Stirling, Stirling, Scotland.

3. Universidade do Minho, Escola de Economia e Gestão, Braga, Portugal.

4. Universidad de Zaragoza, Facultad de Ciencias Sociales y Humanas, Teruel, Spain.

Cite as: Leal, C. C., Branco-Illodo, I., Oliveira, B. M. N., & Esteban-Salvador, L. (2022). Nudging and choice architecture: Perspectives and challenges. *Revista de Administração Contemporânea*, 26(5), e220098. <https://doi.org/10.1590/1982-7849rac2022220098.en>

nudges emerge to change the architecture of choice by using simple cues that lead to a positive behavioral change.

‘Choice architecture’ refers to the setting or environment of choice, while nudges are changes in the design of this choice environment aiming to induce better choices and maintaining freedom of choice by enabling individuals to choose from all the options available (Leal & Oliveira, 2020; Thaler & Sunstein, 2008). Thus, nudges help redesign the choice environment by using deliberate and predictable methods of changing people’s behavior, modifying cues and activating unconscious processes of thought in decision-making that allow decision-makers to make better choices. Nudging implies that decisions are voluntary and that all alternatives are offered without additional cost or effort. This perspective suggests that nudges are neutral because they do not significantly alter economic incentives (Marchiori, Adriaanse, & Ridder, 2017) and, simultaneously, are very powerful because they are not based on effortful processes but rather on the mindless nature of the decision-making process, appealing to cognitive biases (Kroese, Marchiori, & Ridder, 2016). One of the most salient advantages of nudging is its ease of implementation at a low cost leading to effective outcomes. Behavior change interventions are more successful if they consider habits into the nudging design, either by altering the environment to eliminate bad habits or creating cues to generate new good habits (Verplanken & Wood, 2006). Moreover, repetitive behaviors that might look unimportant have the potential to accumulate over time, and, as a whole, they can have a substantial impact on many individuals. For instance, reducing the size of the spoon can have a significant effect on the amount of sugar one puts in coffee, without forbidding someone from adding two spoons of sugar. However, it may be possible to improve the health condition over time through this simple habit.

NUDGING RESEARCH AGENDA

The main purpose of nudging is always to point out the best option and trigger choices aligned with individual’s best interest. However, there is no clear evidence that a nudge influences behavior and choice beyond each specific case (Marchiori et al., 2017), and nudging has faced some controversies. For example, while politicians have welcomed nudging with enthusiasm, scholars or members of the public have criticized or questioned this approach (Ridder, Kroese, & van Gestel, 2022). Nudging is conditioned on the confidence that people have in a certain system, be this governmental, institutional, or corporate. There is a debate on nudging legitimacy since, although it is considered that nudges promote decision-making in people’s own interest, it

could violate principles of transparency and freedom of choice (Leal & Oliveira, 2020; Ridder et al., 2022). Moreover, there is little research on the consequences of nudges in different social groups (Ghesla, Grieder, & Schubert, 2020). There are some exceptions to this dearth of research, including an analysis of the susceptibility to nudge influence on certain groups of people based on their socioeconomic status (Ghesla et al., 2020; Marteau, Hollands, & Fletcher, 2012; Ridder et al., 2020). For example, there is a survey conducted among electricity consumers, which has raised the need for policy-makers to use choice defaults to achieve sustainability objectives. However, “using defaults to trigger more environmentally-friendly choices can effectively act as a hidden tax on the poor. Poorer households are more prone to stick to the default option and are also more likely to prefer cheaper and greyer products” (Ghesla et al., 2020, p. 14).

Nudging has been successfully applied in several areas, such as health or sustainability consumption. However, there are still many opportunities to explore new contexts, issues, and concerns, such as those around nudging legitimacy, transparency, receptiveness, effectiveness, and duration. These areas deserve further research attention.

Nudging legitimacy: The debate about the legitimacy and limits on the use of nudging needs to explore the arguments underpinning these opposing positions more in-depth. While a stream of research focuses on the principles of freedom of choice and individual autonomy, some interventions consider that the best decision from the individual’s point of view is the one that improves individual and social well-being (Nys & Engelen, 2017; Ridder et al., 2020; Schubert, 2017).

Nudging transparency: To tackle the abovementioned legitimacy issues, it has been suggested to disclose the presence of a nudge and its purpose so nudges are made transparent. It is suggested to make nudging interventions transparent to deal with ethical concerns (Wachner, Adriaanse, & Ridder, 2020). Further research on the impact of transparency on nudging effectiveness, individual autonomy, and satisfaction about nudging interventions is needed to understand how it affects the impact of behavioral interventions.

Nudging receptiveness: A related new concept is ‘nudgeability’ and refers to conditions that determine to what extent people are receptive to the influence of nudges (Ridder et al., 2022). Further research is needed to determine the willingness of individuals to accept nudges and how to increase receptiveness to interventions.

Nudging effectiveness: Choice architecture interventions promote positive behavior change across a

geographical location or the target population. However, this may vary depending on the technique and domain of intervention. For instance, food domains are more prone to behavioral change than other areas of intervention, and framing the decision structure tends to be more effective than other techniques (Mertens, Herberz, Hahnel, & Brosch, 2021).

Duration of the nudging effect: Little is known about the duration of a nudge's effect over time. Some authors suggest that for some default nudges, the effect may remain, but not for all types of nudges (Van Rookhuijzen, Vet, & Adriaanse, 2021). Further research is needed to determine which behaviors may produce lasting impact and which specific nudges may have temporal spillover effects.

We believe that future research should aim to provide an in-depth understanding of these concerns at a theoretical and empirical level. These concerns and complexities will be central for future debates on nudging interventions and choice architecture for behavioral change.

THE SPECIAL ISSUE

This special issue focuses on a range of topics related to choice architecture, raising a diversity of theoretical discussions and empirical contributions to existing scholarship on nudging. It contains a theoretical paper that discusses the ethics of nudging policies, two empirical papers that address information in choice architecture and behavioral interventions to better decision-making, and an executive letter that brings the views of a banking institution on nudging. These show evidence of some of the complexities of nudging and choice architecture in the current context of uncertainty.

The paper "Nudge policies in COVID-19 context: A necessary action or ethical dilemma?" (Correa, Ames, & Zappellini, 2022) aims to discuss nudges from a theoretical perspective in the SARS-CoV-2 pandemic context. The results suggest that individuals' commitment is increasing, especially to nudge people toward the preferred behavior and intensification of policy adherence. This paper revisits issues for ethical questioning around autonomy, dignity, and welfare to question the efficiency of nudging policies in the crisis scenario of COVID-19. The authors reflect on moral theories as a way to deal with some of the inefficiencies of nudge theory. At the same time, they identify some of the potential reasons underpinning these inconsistencies in a pandemic context (e.g., message saturation, digital disruption). This conceptual work provides a critical review of some of the main trends and goals of nudging during this challenging time and a discussion of their effectiveness by suggesting a plan of action. This article's

most interesting dimensions are a reflection on major ethical dilemmas (e.g., autonomy, dignity, and welfare) in the pandemic environment and the contribution to existing discussions on normative moral theories. This research shows how approaches such as utilitarianism, deontology, and virtual ethics can be useful to understand some of the inconsistencies observed in nudging theory during COVID-19 as a crisis context and inform nudging policy in future challenging situations.

A second manuscript titled "Expectations, economic uncertainty, and sentiment" (Franco, 2022) analyzes the interaction between economic uncertainty and the informational structure of sentiment. In this study, the authors innovate by explicitly dealing with the dynamic relationships between the informational structures of uncertainty and sentiment, as well as the economic interpretation of such relationships. Through an empirical approach applied to Brazil, the authors study the relationship between uncertainty and sentiment using uncertainty and sentiment measures. The methodology employs a non-linear and non-parametric causality test. The findings show that sentiment follows the uncertainty generated in the media and can be seen as a channel of indecision through the tone and misalignment of expectations. This research points out a new look at the usefulness of ex-ante economic uncertainty indicators since they can signal the moment for obtaining gains with the allocation of greater attention to information. This gives rise to behavioral interventions like the use of nudges to enhance the creation of expectations toward rationality to promote more efficient decisions.

The final research paper of this special issue, "Behavioral economics and auto insurance: The role of biases and heuristics" (Graminha & Afonso, 2022), addresses auto insurance and analyzes how framing, anchoring, and certainty affect the behavior of the consumer. To this end, and based on the theories of behavioral economics, the authors apply six versions of a questionnaire with fourteen questions to respondents from an educational institution. The results show that biases and heuristics can affect the judgment of insurance buyers. The research corroborates previous studies and concludes that the purchase of insurance can be made in a suboptimal way due to biases and heuristics. These results emphasize that behavioral factors play an important role in the consumers' decision process in the insurance industry. As a result, an adequate choice architecture and the use of nudges may increase market efficiency by reducing suboptimal choices. Beyond contributing to knowledge within the decision-making process realm, this research has important implications for insurers, consumers, and regulators. In fact, the development of a regulatory choice architecture can induce choices that maximize individual

well-being and meet the public interest in the context of the insurance industry.

This special issue also contains the executive letter “Nudging is the architecture of choice in the world of banking” (Rosa, 2022), by Paulo Monteiro Rosa, senior economist at Banco Carregosa, which brings the perspective of a private banking institution on the benefits of the use of nudging to prompt its clients to a better path in their decision process. This banking institution acknowledges the use of nudges to help investors meet their best expectations. The nudging techniques include sending informative messages, creating automatic actions, and using technology such as bank apps to present information or giving advice to improve long-term well-being. For example, several nudging actions are defined around savings. Banking institutions can play an educational role in encouraging saving habits, particularly retirement savings. Nudges to inform, simplify, or automatize can be easily implemented and help investors overcome their behavioral bias while investing. For instance, investors tend to suffer from loss aversion and, consequently, experience difficulties when selling assets at a loss. This generally tends to harm their portfolio performance because they keep losing assets for too long, thus incurring additional losses. The use of nudges to generate discipline in the decision process, avoiding behavioral errors, is critical through an investment process. Setting rules, using cues, and providing significant picture information help deal with loss aversion and drive investors to the right path. Additionally, this executive letter focuses on using nudging by financial institutions to promote the choice of socially responsible over traditional funds. The banking world uses nudging mechanisms to help investors move from intention to action, recognizing that investors tend to have social and environmental concerns and that the sustainability agenda is an agenda to which everyone should contribute (e.g.,

in the way they consume, how they invest, and how they choose companies for resource allocation). Overall, small changes in the choice architecture produce better planning, saving, and investing while aligning investors’ decisions with their initial intentions, generating better patterns and obtaining better results without great effort.

This special issue has implications for governments, central banks, policy-makers, and regulators. First, understanding the ethical challenges of nudging and how policy design may generate adherence. Especially, as the paper by Correa, Ames and Zappellini (2022) discusses, how to deal with ethical dilemmas and use nudging in crisis contexts. Second, understanding how expectations and sentiment in contexts of uncertainty impact the decision-making process and how to use heuristics and framing to alter the choice architecture to maximize individual well-being. Finally, the executive letter provides insights into how this knowledge is currently being applied within the banking world. Thus, governments, central banks, policy-makers, and regulators may benefit from a more profound understanding of using these nudging intervention mechanisms for behavioral change or regulating their use within ethical limits.

ACKNOWLEDGEMENTS

We would like to express our gratitude to the *Journal of Contemporary Administration* editors-in-chief, namely Professor Wesley Mendes-da-Silva and Professor Marcelo de Souza Bispo, for the invitation to produce this special issue and for all their support during the process. Also, we thank the anonymous reviewers for their work in multiple review rounds for their professionalism and commitment to scientific quality and rigor. Finally, we thank all authors who submitted their work for consideration in this issue.

REFERENCES

- Correa, A. L., Ames, M. C. F. D. C., & Zappellini, M. B. (2022). *Nudge* policies in COVID-19 context: A necessary action or ethical dilemma? *Revista de Administração Contemporânea*, 26(5), e210033. <https://doi.org/10.1590/1982-7849rac2022210033.en>
- Franco, D. M. (2022). Expectations, economic uncertainty, and sentiment. *Revista de Administração Contemporânea*, 26(5), e210029. <https://doi.org/10.1590/1982-7849rac2022210029.en>
- Ghesla, C., Grieder, M., & Schubert, R. (2020). *Nudging* the poor and the rich – A field study on the distributional effects of green electricity defaults. *Energy Economics*, 86, 104616. <https://doi.org/10.1016/j.eneco.2019.104616>
- Graminha, P. B., & Afonso, L. E. (2021). Behavioral economics and auto insurance: The role of biases and heuristics. *Revista de Administração Contemporânea*, 26(5), e200421. <https://doi.org/10.1590/1982-7849rac2022200421.en>
- Kroese, F. M., Marchiori, D. R., & Ridder, D. T. D. (2016). *Nudging* healthy food choices: A field experiment at the train station. *Journal of Public Health*, 38(2), e133–e137. <https://doi.org/10.1093/pubmed/fdv096>
- Leal, C. C., & Oliveira, B. (2020). Choice architecture: Nudging for sustainable behavior. In C. F. Machado & J. P. Davim (Eds.), *Sustainable management for managers and engineers* (Chap. 1). London: ISTE and Wiley. <https://doi.org/10.1002/9781119804345.ch1>
- Marchiori, D. R., Adriaanse, M. A., & Ridder, D. T. D. (2017). Unresolved questions in nudging research: Putting the psychology back in nudging. *Social and Personality Psychology Compass*, 11(1), e12297. <https://doi.org/10.1111/spc3.12297>
- Marteau, T. M., Hollands, G. J., & Fletcher, P. C. (2012). Changing human behavior to prevent disease: The importance of targeting automatic processes. *Science*, 337(6101), 1492–1495. <https://doi.org/10.1126/science.1226918>
- Mertens, S., Herberz, M., Hahnel, U. J. J., & Brosch, T. (2021). The effectiveness of nudging: A meta-analysis of choice architecture interventions across behavioral domains. *Proceedings of the National Academy of Sciences*, 119(1), e2107346118. <https://doi.org/10.1073/pnas.2107346118>
- Neal, D. T., Wood, W., & Quinn, J. M. (2006). Habits—A repeat performance. *Current Directions in Psychological Science*, 15(4), 198–202. <https://doi.org/10.1111/j.1467-8721.2006.00435.x>
- Nys, T. R., & Engelen, B. (2017). Judging *nudging*: Answering the manipulation objection. *Political Studies*, 65(1), 199–214. <https://doi.org/10.1177/0032321716629487>
- Ridder, D., Feitsma, J., van Den Hoven, M., Kroese, F., Schillemans, T., Verweij, M., Venema, T., Vugts, A., & Vet, E. D. (2020). Simple nudges that are not so easy. *Behavioural Public Policy*, 1–19. <https://doi.org/10.1017/bpp.2020.36>
- Ridder, D., Kroese, F., & van Gestel, L. (2022). Nudgeability: Mapping conditions of susceptibility to nudge influence. *Perspectives on Psychological Science*, 17(2), 346–359. <https://doi.org/10.1177/1745691621995183>
- Rosa, P. M. (2022). Nudging is the architecture of choice in the world of banking. *Revista de Administração Contemporânea*, 26(5), e220073. <https://doi.org/10.1590/1982-7849rac202220073.en>
- Schubert, C. (2017). Green nudges: Do they work? Are they ethical? *Ecological Economics*, 132, 329–342. <https://doi.org/10.1016/j.ecolecon.2016.11.009>
- Thaler, R. H., & Sunstein, C. R. (2008). *Nudge: Improving decisions about health, wealth, and happiness*. New Haven: Yale University Press.
- Van Rookhuijzen, M., Vet, E. D., & Adriaanse, M. A. (2021). The effects of nudges: One-shot only? Exploring the temporal spillover effects of a default nudge. *Frontiers in Psychology*, 12, 683262. <https://doi.org/10.3389/fpsyg.2021.683262>
- Verplanken, B., & Wood, W. (2006). Interventions to break and create consumer habits. *Journal of Public Policy & Marketing*, 25(1), 90–103. <https://doi.org/10.1509/jppm.25.1.90>
- Wachner, J., Adriaanse, M., & Ridder, D. (2020). The influence of nudge transparency on the experience of autonomy. *Comprehensive Results in Social Psychology*. <https://doi.org/10.1080/23743603.2020.1808782>
- Wansink, B., & Sobal, J. (2007). Mindless eating: The 200 daily food decisions we overlook. *Environment and Behavior*, 39(1), 106–123. <https://doi.org/10.1177/0013916506295573>


Authorship

Cristiana Cerqueira Leal*

Universidade do Minho, Escola de Economia e Gestão, Núcleo de Investigação em Políticas Económicas e Empresariais

Campus Gualtar, R. Bairro do Sol 4, 4710-057, Braga, Portugal.

E-mail: ccerqueira@eeg.uminho.pt


 <https://orcid.org/0000-0003-3731-0240>

Ines Branco-Illodo

University of Stirling

University of Stirling, Airthrey Road, Stirling, FK9 4LA, Scotland.

E-mail: ines.branco-illodo@stir.ac.uk


 <https://orcid.org/0000-0003-3037-8760>

Benilde Maria do Nascimento Oliveira

Universidade do Minho, Escola de Economia e Gestão

Campus Gualtar, R. Bairro do Sol 4, 4710-057, Braga, Portugal.

E-mail: benilde@eeg.uminho.pt


 <https://orcid.org/0000-0003-4587-5452>

Luisa Esteban-Salvador

Universidad de Zaragoza, Facultad de Ciencias Sociales y Humanas

Calle Atarazana, número 4, 44003, Teruel, Spain.

E-mail: luisaes@unizar.es

 <https://orcid.org/0000-0001-6511-1893>

* Corresponding Author

Conflict of Interest

The authors have stated that there is no conflict of interest.

Copyrights

RAC owns the copyright to this content.

Plagiarism Check

The RAC maintains the practice of submitting all documents approved for publication to the plagiarism check, using specific tools, e.g.: iThenticate.

SCIENTIFIC EDITORIAL BOARD AND EDITORIAL TEAM FOR THIS ISSUE:

Editorial Council

Alketa Peci (EBAPE/FGV, Rio de Janeiro, RJ, Brazil)

Gabrielle Durepos (Mount Saint Vincent University, Halifax, Nova Scotia, Canada)

Rafael Alcadipani da Silveira (EAESP/FGV, São Paulo, SP, Brazil)

Rafael Barreiros Porto (UnB, Brasília, DF, Brazil)

Silvia Gherardi (University of Trento, Trento, Italy)

Editor-in-chief

Marcelo de Souza Bispo (UFPB, João Pessoa, PB, Brazil)

Associate Editors

Ariston Azevedo (UFRGS, Porto Alegre, RS, Brazil)

Carolina Andion (UDESC, Florianópolis, SC, Brazil)

Denize Grzybovski (UPF, Passo Fundo, RS, Brazil)

Eduardo da Silva Flores (FEA/USP, São Paulo, SP, Brazil)

Elisa Yoshie Ichikawa (UEM, Maringá, PR, Brazil)

Emílio José M. Arruda Filho (UNAMA, Belém, PA, Brazil)

Evelyn Lanka (Cranfield School of Management, Bedford, United Kingdom)

Fernando Luiz Emerenciano Viana (Unifor, Fortaleza, CE, Brazil)

Gaylord George Candler (University of North Florida, Jacksonville, Florida, USA)

Gustavo da Silva Motta (UFF, Niterói, RJ, Brazil)

Keysa Manuela Cunha de Mascena (Unifor, Fortaleza, CE, Brazil)

Ludmila de Vasconcelos Machado Guimarães (CEFET-MG, Belo Horizonte, MG, Brazil)

Natália Rese (UFPR, Curitiba, PR, Brazil)

Orleans Silva Martins (UFPB, João Pessoa, PB, Brazil)

Pablo Isla Madariaga (Universidad Técnica Federico Santa María, Chile)

Paula Castro Pires de Souza Chimenti (UFRJ/Coppead, Rio de Janeiro, Brazil)

Rafael Chiuzi (University of Toronto Mississauga, Mississauga, ON, Canada)

Sidnei Vieira Marinho (Univali, São José, SC, Brazil)

Scientific Editorial Board

André Luiz Maranhão de Souza-Leão (UFPE, Recife, CE, Brazil)

Aureliano Angel Bressan (CEPEAD/UFGM, Belo Horizonte, MG, Brazil)

Bryan Husted (York University, Canada)

Carlos M. Rodriguez (Delaware State University, USA)

Cristiana Cerqueira Leal (Universidade do Minho, Portugal)

Diógenes de Souza Bido (Mackenzie, São Paulo, SP, Brazil)

Erica Piros Kovacs (Kelley School of Business/Indiana University, USA)

Elin Merethe Oftedal (University of Stavanger, Norway)

Fábio Frezatti (FEA/USP, São Paulo, SP, Brazil)

Felipe Monteiro (INSEAD Business School, USA)

Howard J. Rush (University of Brighton, United Kingdom)

James Robert Moon Junior (Georgia Institute of Technology, USA)

John L. Campbell (University of Georgia, USA)

José Antônio Puppim de Oliveira (United Nations University, Yokohama, Japan)

Julián Cárdenas (Freie Universität, Berlin, Germany)

Lucas A. B. de Campos Barros (FEA/USP, São Paulo, SP, Brazil)

Luciano Rossoni (UniGranRio, Rio de Janeiro, RJ, Brazil)

M. Philippe Protin (Université Grenoble Alpes, France)

Paulo Estevão Cruvinel (Embrapa Instrumentação, São Carlos, SP, Brazil)

Rodrigo Bandeira de Mello (Merrimack College, USA)

Rodrigo Verdi (MIT Massachusetts Institute of Technology, Cambridge, USA)

Valter Afonso Vieira (UEM, Maringá, PR, Brazil)

Wagner A. Kamakura (Jones Graduate School of Business, Rice University, Houston, USA)

Editing

Typesetting and normalization to APA standards: Kler Godoy (ANPAD, Maringá, Brazil); Simone L. L. Rafael (ANPAD, Maringá, Brazil).

Frequency: Continuous publication.

Circulation: Free open access to the full text.

Indexing, Directories and Rankings

Scielo, Redalyc, DOAJ, Latindex, Cengage/GALE, Econpapers, IDEAS, EBSCO, Proquest, SPELL, Cabell's, Ulrichs, CLASE, Index Copernicus International, Sherpa Romeo, Carhus Plus+, Academic Journal Guide (ABS), DIADORIM, REDIB, Sumários.org, ERIHPlus, OAJI, EZB, OasisBR, IBZ Online, WorldWideScience, Google Scholar, Citefactor.org, MIAR, Capes/Qualis.

RAC is a member of, and subscribes to the principles of the Committee on Publication Ethics (COPE) for scholarly publication

