

Editorial

## Nudging and Choice Architecture: Perspectives and Challenges



*Nudging e Arquitetura da Escolha: Perspetivas e Desafios*

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### 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,

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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.

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