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# Nudging in organizations: How to avoid behavioral interventions being just a façade

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ABSTRACT

The utilization of nudging—behavioral interventions aimed at influencing the actions of employees or clients—has gained traction in organizations due to its perceived universal efficacy and cost-effectiveness. However, this paper presents a critical view, arguing that the success of a nudge is significantly influenced by a specific context, challenging the notion of it being a universal solution for organizational behavior modification. This paper highlights three primary concerns: the absence of a comprehensive behavioral change framework; an overemphasis on immediate effects and ad hoc successes at the expense of changing deep-seated motivations, decision-making capabilities, or organizational processes; and a tendency among managers to rely on anecdotal beliefs rather than robust evidence. The paper offers a framework for understanding these challenges and proposes organizational policies (training of managers and continuous organizational experimentation) to implement effective nudging strategies. This framework's validity is supported by evidence from semi-structured interviews and focus group with industry professionals.

## 1. Introduction

Nudging or behavioral interventions have become a standard tool (not only) in management to change employee, client, or customer behavior (Chapman et al., 2021). By subtly manipulating choice architecture, i.e., available information or the saliency of decision alternatives, nudges ought to steer the behaviors of individuals in the desired direction. There is systematic evidence of the generally positive impact of nudges (DellaVigna & Linos, 2022; Hummel & Maedche, 2019; Mertens et al., 2022), strong majority support for them (Reisch & Sunstein, 2016; Tikotsky et al., 2020), and many well-known examples of their significant effects on diverse areas of decision-making at minimal costs (Benartzi et al., 2017). Famously, using default options and automatically enrolling employees in a retirement savings plan led to almost universal participation in the plan (Thaler & Benartzi, 2004); changing the default option for employee promotion from an active choice to automatically enrolling and allowing opt-outs reduced gender gap without negatively affecting performance or wellbeing (He et al., 2021); and encouraging employees to plan by writing down a specific date and time for getting their vaccination increased vaccination rates (Milkman et al., 2011).

Using nudges in organizations is seen as an imperative: "managers need to see themselves as choice architects" (Mele et al., 2021, p. 958). Nudges are trusted to help with the transformation of organizations even in the complex issues of CSR (Corporate Social Responsibility) or ESG (Environmental, Social, Governance) objectives (Huang et al., 2023), where the stakes are high and the challenges multi-layered. The implications for the corporate world are profound; nudges should deliver cost-effective and subtle means to align individual actions with organizational objectives.

However, a closer look shows that there is a significant publication bias in the literature, the effectiveness of nudges is very heterogeneous, and sometimes they backfire as they are highly context-dependent (DellaVigna & Linos, 2022; Maier et al., 2022; Luo et al., 2023; Osman et al., 2020). Moreover, it is not even clear which kinds of interventions fall under the nudge approach and which do not. Thus, nudges may not be as reliably effective a tool for behavior change in organizations as are commonly perceived (Szaszi et al., 2022).

This article identifies three reasons why nudging in organizations may be a façade. First, the problematic situation in organizational nudging should be understandable, as "the nudge theory" is an atheoretical and eclectic set of contextually workable ideas. Moreover, it cannot be expected that there will be one compact theory or conceptual framework that can explain all the processes of behavioral changes (i.e., basically all human behavior). Currently, over 80 theories, frameworks, and models attempt to explain the mechanisms of behavioral change

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(West et al., 2019). The sheer number shows that there is no consensus on understanding what behavioral change is, its determinants, or how to establish the necessary or sufficient conditions for successful intervention.

Moreover, many nudges do not have a solid foundation of field evidence to support their context-free effectiveness, are not sustainable in the long term, or their scaleability is in other ways limited (Al-Ubaydli et al., 2021). To make matters even more challenging, behavioral sciences suffer from the limited replicability of even foundational studies (Open Science Collaboration, 2015), and, at the same time, the least replicated and valid streams of literature are the ones that receive the most media attention, and are eventually promoted to practice (Folk & Dunn, 2023; Youyou et al., 2023). The most disparaging to the field are revelations of famous behavioral science studies based on falsified data or leading figures engaging in questionable research practices (Simonsohn et al., 2022).

Second, many successful nudges gain from the simple fact of a setting change or a surprise; at best, they address proximate causes of a particular behavior and do not change people's underlying motivations or improve decision-making capabilities. Without genuinely addressing the heterogeneous causes (Bryan et al., 2021) of the undesirable behavior of individuals in organizations – a process that often requires systematic changes to how the organization operates – the nudges often fail in the long run (Mols et al., 2015).

Third, leaders and managers may implement nudges based on their folk beliefs that they are magically effective measures that can be picked off the shelf and applied directly. Similar management fads often arise as new ideas or approaches to solving complex issues are seen as innovative and attractive management practices (Gibson & Tesone, 2001). The nudge approach has become popular as a management fad because it offers a simple, appealing, one-size-fits-all, and seemingly costless way to influence organizational behavior. Thus, by employing nudges, an organization can cheaply signal that it is actively trying to improve and tackle its problems.

This article offers a conceptual framework for understanding this undesirable state of affairs and provides a way out by proposing incorporating a culture of continual experimentation. The validity of the framework and its recommendations were confirmed by a qualitative study using semi-structured interviews and focus group with two clusters of industry professionals, managers, and consultants.

## 2. The nudge "theory" as Wittgenstein's ladder

A nudge is "any aspect of the choice architecture that alters people's behaviour in a predictable way without forbidding any options or significantly changing their economic incentives. To count as a mere nudge, the intervention must be easy and cheap to avoid. Nudges are not mandates" (Thaler & Sunstein, 2009, p. 6). The definition has sparked much debate because of its vagueness; "there does not seem to be an obvious common denominator that truly defines nudges" (Kosters & Van der Heijden, 2015, p. 279). Several authors have come up with variant definitions of nudges (Congiu & Moscati, 2022; Hansen, 2016), but it remains unclear what choice architecture is or what falls under economic incentives (authors usually have in mind only direct money transfers; however, others also count time spent, social sanctions, the need to allocate attention or memory, etc.).

In terms of the application of nudging in organizations, consultancies have come up with variations of different definitions, sometimes selling what its goal is, sometimes which interventions it uses, e.g., McKinsey: "Subtle interventions to help people make better decisions" (Güntner et al., 2019), or BCG: „Nudges are easy, low-cost interventions that can alter people's decision making without attaching a substantial financial reward or penalty… The influences can include emotions, biases, how other people think or feel, and the accepted behaviors within a particular group, such as an office or a company" (Dhar et al., 2021). Despite the vagueness of what nudging is, the nudge movement has been considered to be highly influential in demonstrating that understanding how people perceive, make decisions, and behave can lead to a design of simple measures that change individuals' behavior without forcing, commanding, or forbidding them to do so (Halpern, 2015b; Mažar & Soman, 2022).

Although nudge is referred to as "nudge theory" (Sunstein & Reisch, 2017), by its description, nudging is not a theory or a conceptual framework offering guidance on how to influence people. As is apparent from its definition, if a measure works, it is a nudge; if it does not work, it is not a nudge. There are no nudges that don't work. *Anything* that changes behavior without economic incentive or coercion in a predictable way can be a nudge. As an example, if I want to ask a colleague for a favor, I can ask nicely instead of a neutrally worded request; I can visit them in person instead of writing an email; I can ask them if they want to help me or stress that I need help; I can cite past instances where they have helped me; I can cite cases in which I have helped them; I can jokingly threaten them; I can give them a small gift; I can paint the room pink; I can sing a touching song… There are myriad ways to (try to) alter my colleague's behavior to comply with my request, and it is not helpful to mix all these endeavors into the all-encompassing term of a nudge.

Indeed, a behavioral intervention is an even more abstract term because it is any procedure or technique that aims to influence the behavior of individuals or groups (Michie et al., 2011). However, individual behavioral interventions are usually based on a specific theory of how the human mind works; the nudge approach contains no such thing. If we look for necessary conditions for the effectiveness of a nudge, its mediators or moderators, or its impact on heterogeneous individuals, nudging theory offers no guidance. Every particular nudge must use theories related to the behavior we want to change. For example, if employees ignore hand hygiene when they enter an office, managers can draw attention to a hand sanitation routine with a warning applying the saliency theory (Kluger & DeNisi, 1996); they can pinpoint what their colleagues are doing using the social proof theory (Schultz et al., 2007); they can adapt the design of a door so that people don't have to touch the handle by hand applying ergonomics (Joseph & Rashid, 2007). However, the nudge approach does not guide managers on which theories or practices are most applicable in the situation and under what conditions.

Specific theories highlight boundary conditions and factors that influence the effectiveness of the measures. The salience theory cautions that if there are too many warnings, people's attention will be overwhelmed, and they stop noticing alerts altogether. The social proof theory points out that to be persuaded by colleagues, an individual must identify with their identity and take their behavior as relevant guidelines. If they don't consider their colleagues as their in-groups or don't believe they have appropriate knowledge, information about their behavior will be irrelevant. Ergonomics asks about patterns in the dynamics of people entering the office, body movements, or hand physiology. As can be seen, the factors that different theories consider necessary for a measure to work are diverse. Some of these variables are readily observable; others need to be non-trivially found out. The nudge theory does not help organizational leadership navigate the relevant variables.

If anything can be considered a general nudge theory, it is the theory of correction of systematic deviations from rational choice (but see: Sunstein, 2023). Indeed, nudges are designed to rectify individuals' systematic biases and fallacies. "Many nudges are developed with reference to well-established behavioral findings, demonstrating that people depart from perfect rationality," as the co-founder of the nudging has written (Sunstein, 2023, p. 325). However, the nudge theory does not explain how humans could attain "perfect rationality" (i.e., the perfectly rational behavior in every setting) or even approximate it (Gigerenzer, 2008; Hertwig & Grüne-Yanoff, 2017). Instead, it posits that people can make mistakes in specific situations, warranting the implementation of measures to decrease the likelihood of such errors.

While nudges can effectively minimize singular mistakes or oversights in specific contexts, they are inherently reactive and ad hoc, often

failing to address the root causes of a bias and equipping individuals with the necessary skills or principles to apply in other similar situations (Hertwig & Ryall, 2020). For example, providing visual aids in the workplace that compare a department's energy consumption to different departments can encourage employees to reduce their energy usage (Allcott & Rogers, 2014). This nudge taps into social comparison but does not address the root causes of high energy usage or provide employees with broader strategies for conserving energy in other aspects or places of their work. Another example is placing healthier food options at eye level or at the beginning of the line in the office cafeteria, which can encourage employees to choose more nutritious meals (Hanks et al., 2012). This nudge uses the availability heuristic but does not address the underlying causes of unhealthy eating habits or provide employees with nutrition knowledge to make informed decisions in other situations. Another one is that automatically enrolling individuals in a pension plan, vocational training, or mentoring makes people more likely to participate, as it requires effort to opt-out (Jachimowicz et al., 2019). This nudge addresses the status quo bias, where individuals tend to stick with the option do-not-do-anything. However, it doesn't teach people the importance of saving for retirement or personal and professional development; it merely capitalizes on their tendency to avoid deciding. As such, the utility of nudges is confined to reducing (possible) mistakes in specific instances without offering broader, adaptable learning opportunities, new identity-building, or internalizing novel norms (Hertwig & Grüne-Yanoff, 2017; Hertwig & Ryall, 2020; Houdek, 2017). Indeed, even such measures can be highly beneficial and easily pass the cost-benefit criterion. The problem, however, is that its single-usefulness makes it unscalable. The nudging does not lead to the pursuit of systematic organizational improvement and, mainly, offers no guidance on incorporating it into an organizational strategy or culture to eliminate the causes of such errors.

As initially formulated by Thaler and Sunstein, the nudge theory can be considered a Wittgenstein's ladder ["My propositions serve as elucidations in the following way: anyone who understands me eventually recognizes them as nonsensical, when he has used them—as steps—to climb beyond them. (He must, so to speak, throw away the ladder after he has climbed up it.)" Wittgenstein, 2003, p. 89] in the sense that they introduced an easy-to-understand and salient rule of thumb for those who want to direct others toward desired behaviors: influence them without coercion by understanding their psychology and the environment in which they are making a choice.

After understanding the concept, we no longer need the nudge theory to develop behavior change initiatives. On the contrary, references to the nudge theory lead to moot discussions of what *really* is and what is not nudge, how to do nudges taxonomies, and how effective nudges and their categories are or are not (Congiu & Moscati, 2022). As I elaborated at the beginning of the section, almost anything can be a nudge, so it is a strange debate in which various constructs are mixed into the nudge cocktail, and their incommensurable results are averaged as proof of a nudge's (in)effectiveness.

Consider a meta-analysis that classifies nudges according to categories such as Energy, Environment, Finances, Health, etc. (Mertens et al., 2022). For each category, it then measures the effect sizes of nudges even though they are based on distinct constructs such as a reference price, a social norm, an effect of authority, a reminder, or a default, and these constructs, in turn, occur in different topics. When the meta-analysis estimates the average effect, it measures the impact of nudges on the average amount of goods bought, vaccines received, or fees paid. Simonsohn and colleagues commented on the result: "[H]ow to decipher the meaning of the mean that combines the effect of (1) telling people all bananas cost the same on the share of eco bananas purchased, (2) telling households a researcher is coming to check their stickers on placing said stickers, and (3) defaulting academics into a $CO_2$ fee on paying that fee[?]" (Simonsohn et al., 2022). What is even stranger is that a nudge or a behavioral intervention is included in these meta-analyses or systematic reviews only if it is explicitly named so; even though virtually every single study in marketing or management or about persuasion or communication could be considered a nudge study, it is not included into the body of nudge literature (Hummel & Maedche, 2019).

## 3. Why do nudges not work (in the long run)?

Focusing on specific biases, fallacies, or heuristics may seem like a logical starting point for behaviorally informed interventions, as it directly addresses decision-making's flawed (i.e., not-perfectly-rational) aspects ("Proponents of 'nudge theory' argue that, because of our human susceptibility to an array of biases, we often make subprime choices and decisions that make us poorer, less healthy, and more miserable than we might otherwise be…"; the introduction into the anthology of nudging; Sunstein & Reisch, 2017). Several behavior change frameworks directly apply interventions that are based on the "usual suspects" factors from the bias literature, such as MINDSPACE (Messenger, Incentives, Norms, Defaults, Salience, Priming, Affect, Commitment, and Ego; Dolan et al., 2012). It is undoubtedly a valuable heuristic to remember that a measure to improve biased decision-making can be a simple nudge (not fines, bans, financial bonuses, new compliance measures, or oversight); however, this approach overlooks the broader context in which biases occur.

The issue with nudges is not that sometimes they don't work – no measure is perfectly successful, and in a complex and unpredictable world, too many factors always interfere with the outcome. The problem is that if a nudge is effectively anything, the nudge approach does not guide what to do differently, what to take into account, and how to proceed other than simply trying something else from the list of famous nudges; "a better nudge may well be the right response" write Sunstein (2017, p. 7). However, for the advice that when something doesn't work, we should choose something "better," we don't need the nudge approach.

The accumulating literature on failed nudges and behavioral interventions shows that there are systematic factors behind the failures, like missing long-term incentives, backfiring, offset by adverse effects, short-term effects offset by long-term effects, etc. (Lorko et al., 2024; Osman et al., 2020; Sunstein, 2017). However, there may be many more systematic causes of failures, such as an absence of learning or opportunities for understanding, inadequate understanding of target behavior, insufficiently powerful interventions, misaligned incentives and backfiring, displacement effects, inadequate implementation or monitoring, etc. Table 1 provides a detailed overview of the reasons for failure and illustrates them with organizational examples.

The nudge movement typically focused on how the average individual might respond to a specific intervention, without addressing the varied responses that may arise from the diversity of people. Although people from different socioeconomic backgrounds, ages, or genders may respond equally to some nudges (e.g., Hotard et al., 2019), the assumption of homogeneous effect is generally incorrect (Bryan et al., 2021). The nudge approach insufficiently considers the heterogeneity of people's preferences and systemic and structural factors contributing to certain behaviors.

Consider the example of a default, one of the most potent behavioral interventions (Jachimowicz et al., 2019). According to Ghesla and colleagues (2020), people with lower education or income levels are more susceptible to default nudges, even if these nudges result in them making suboptimal choices. On the other hand, a study by Bronchetti et al. (2013) demonstrated that defaults automatically transferring taxpayer refunds into savings accounts were ineffective because low-income tax filers had already targeted plans to spend their refunds. Nudges do not work consistently or effectively due to the lack of understanding of why a specific nudge should be applied (or not), how different contexts and individuals influence its effectiveness, and the disregard for systemic or institutional factors that influence behavior (Hecht et al., 2023; Mariotti et al., 2023). Indeed, nudges may be most effective when people are

**Table 1**
Categories of Reasons Why Simple Nudges and Behavioral Interventions Fail; Illustrative Examples.

| Failure Category | Reasons for Failure | An Example |
|---|---|---|
| Absence of learning or opportunities for understanding | A nudge to make a particular choice does not allow learning or improving decision-making skills or adopting technology | A firm pre-selects a health insurance plan for its employees. The default may prevent employees from considering alternative plans that better suit their needs. They may not learn to understand the details of a plan or how to optimize their coverage. |
| Inadequate understanding of target behavior | Misjudging the drivers of behavior or the context in which behavior occurs | Reminders to sign up for training may improve the immediate response rate. However, they may not address the root causes of disengagement or underachievement. |
| | Reactance (people resist attempts to influence or control their behavior, often by doing the opposite of what is intended) | Organizations can implement nudges to promote environmentally friendly practices. However, employees may resist these efforts if they perceive them as controlling or patronizing. |
| | Overgeneralization | To promote a healthier lifestyle, a company may send motivational emails to nudge all employees towards taking the stairs instead of elevators. However, employees may continue using elevators if the stairs are inconveniently located, poorly lit, or poorly maintained in some company buildings. |
| | Rigidity | Continuous nudging in support of a charity that has proven untrustworthy reduces employee confidence in the company's recommendation of whom to donate to. |
| Insufficiently powerful intervention | The intervention is not strong enough to overcome existing habits or barriers to change | A company may introduce break room enhancements to nudge employees to take regular breaks for relaxation and socialization. However, employees may continue working through breaks despite the available amenities if the workplace culture is high-pressure. |
| | Resistance to change | A firm creates an open office layout to encourage employee collaboration and communication. If employees feel uncomfortable or unproductive in the new environment, the change won't occur. |
| Misaligned incentives and backfiring | The intervention creates incentives that inadvertently promote undesired behaviors | A company might encourage shorter meetings by nudging employees to use default calendar settings that allocate less time for meetings. However, this could lead to rushed discussions, reduced collaboration, or the need for additional follow-up meetings to address agenda items fully. |
| | Cultural or social factors | A company's attempt to nudge a flexible work schedule fails because it contradicts local cultural norms about work hours. |
| Displacement effects | The intervention leads to unintended consequences or shifts the problem elsewhere. | A company uses nudges to reduce its carbon footprint in a nudged area (car-pooling), but employees increase it in another (lower public transport usage). |
| | The intervention leads to the change of proxy or measured data, not actual behavior. | Informational nudges may increase healthy work hours but have no long-term positive impact on wellbeing or burnout because employees are nudged to work at home. |
| Inadequate implementation or monitoring | The intervention is not implemented or monitored effectively, reducing its impact. | A company is nudging a diversity training program without adequate preparation, follow-up, or assessment of outcomes. |

uncertain, distracted, or ambivalent about their choices and are looking for direction, particularly when they have conflicting preferences. However, this is not the most typical kind of decision-making, especially not in organizations.

In sum, the nudgeability of different groups and contexts varies (de Ridder et al., 2022). Without further scrutiny of the processes underlying nudge effectiveness, the outcomes of many nudges will be null or unintended adverse effects. While nudges can be a part of the business solution, a broader and more systemic approach is often required to drive meaningful, long-term behavioral change in organizations (see a similar argument for the limitations of nudges to solve social problems; Chater & Loewenstein, 2023), e.g., approaches based on social identity change and norm internalization (Mols et al. 2015).

## 4. Nudges as a management fad

Despite the described limitations, why is the nudge movement so widespread? According to the life cycle theory of management fads (Gibson & Tesone, 2001), nudging can be seen as one. The nudge approach offers (by its definition) simple, encouraging, easy-to-cut-and-paste, and one-size-fits-all solutions – hallmarks of a management fad (Miller & Hartwick, 2002).

The nudge approach became popular in the 2000s (after Thaler's & Sunstein's eponymous book), and this discovery stage saw early articles and research on "the nudge theory," exploring its potential to influence behavior without imposing mandates or restrictions. In the wild-acceptance stage, the nudge approach gained immense popularity and was applied in various domains, including healthcare, finance, and broader public policies (Benartzi et al., 2017; Halpern, 2015a, 2015b). Private organizations have begun to adopt nudging to influence customer and employee behavior and improve their bottom line. Consultancies have sprung up offering behavioral insights. Based on a list compiled by Ingrid Melvær Paulin, Director of Behavioral Insights at UnitedHealth Group, nearly 400 companies are now applying behavioral science worldwide (Paulin, 2023). There were articles in management journals showing nudges as a panacea to corporate issues (as in the case of the MINDSPACE: "Better decisions can be achieved by engineering the environment to engage a "good bias" to overcome a more damaging "bad bias."… it does offer a promising, alternative toolbox to address key strategic challenges associated with competition, search, and innovation…" (Liu et al., 2017, p. 156)).

Any improvement to a process (pre-filling information that people forget when filling out a form; making it easier to dispose of trash so people don't throw it on the ground; sending informational emails; any default setting, etc.) was suddenly labeled as nudging. As the nudge movement continued gaining momentum, critics emerged, arguing that nudging is an ill-defined research line based on a confirmatory bias – if a simple intervention works, it is popularized as an effective nudge; similar simple interventions that don't work are not talked about or are named differently (Gigerenzer, 2015; Mols et al., 2015).

The nudge approach is based on influencing behavior without removing an individual's freedom of choice. However, managers may interpret this rule as a license to impose their own preferences on employees, which creates a lack of consideration for employee autonomy, potentially leading to resentment and demotivation. As an example, consider a situation in which a supervisor sends an email to her subordinates, using social proof, pointing out that, according to a survey, employees growing quickly in their careers like to work on interesting projects on the weekend and – coincidentally – also asks who might volunteer for a weekend wrap-up of a task that's on fire. It's not a mandate for employees, of course, they can simply delete the email, and they don't have to volunteer. However, the supervisor's action will be

necessarily interpreted as manipulative; for another example, see (Alempaki et al., 2023).

This digestion stage saw more discussions and debates about the ethics and effectiveness of nudging (Hansen & Jespersen, 2013; Kuyer & Gordijn, 2023; Mažar & Soman, 2022). As most nudges give the impression that they could be picked up off the shelf and applied successfully anywhere, nudges were often designed to produce immediate changes in behavior, but they may not lead to sustainable changes in the long run. On the other hand, sometimes, a nudge could have significant long-term consequences (Allcott & Rogers, 2014; Venema et al., 2018).

Since nudging is an exceptionally broadly defined concept, one can select a behavioral intervention according to preexisting interest or simply familiarity. Decision-makers may become enamored with a recently popularized mode of intervention; however, the most commonly recommended intervention strategies in the media have a weak basis of scientific evidence (Folk & Dunn, 2023). Managers could pick interventions that have just worked in their region or country (Vivalt et al., 2021) or a measure in which they have their self-interest, overlooking the benefits of other approaches. For example, the U.S. Environmental Protection Agency (EPA) consistently cites behavioral economics findings that support increased environmental regulation (Viscusi & Gayer, 2016).

Indeed, it is not the nudge framework's fault that it is being abused in practice. However, the definition of nudge contains the magical idea that "the intervention must be easy" and that it "alters people's behaviour in a predictable way," and practitioners have seized on this. Why try to implement complex, profound, consensual organizational changes when a simple nudge will do. Thus, nudging could potentially crowd out complex, long-term, or expensive interventions, although these measures can achieve more effective and sustainable outcomes (Houdek, 2020). It became clear that nudging alone was not a panacea for addressing complex organizational issues. Various examples have emphasized the importance of considering nudging interventions' context, long-term implications, and potential unintended consequences (Congiu & Moscati, 2022). For example, pension plan defaults lead to a false sense of security for individuals, who may not realize the need to save more or choose better investment options. Additionally, automatically enrolled individuals often remain at the default, low contribution rate, which might not be enough to ensure a comfortable retirement (Madrian & Shea, 2001).

The disillusionment stage of nudging signifies a shift toward a more comprehensive understanding of the concept's limitations and potential drawbacks (Houdek, 2017). While nudging can be effective in many situations, it is not a universally applicable solution for complex organizational issues. As research progresses in exploring the appropriate use and boundaries of nudging, organizations must consider the context and potential consequences of their interventions to ensure they are ethically sound and effective (Mažar & Soman, 2022).

Indeed, any fad can introduce an organizational innovation or a helpful practice, but if it fails to deliver on its promises, it may damage the underlying idea that might have had the power to change things for the better.

## 5. What is the way forward?

If nudging is Wittgenstein's ladder, what is the next course of action after we have climbed it and discarded it? The answer is contained in the process of implementation and testing of behavioral interventions – i.e., the systematic discovery, testing, and evaluation of measures to achieve the desired behavioral changes. Utilizing a scientific approach to organizational interventions is essential for achieving lasting and effective behavioral change. Instead of merely relying on identified biases and using off-the-shelf nudges, organizations should adopt a framework based on scientific thinking for successful behavior change. Many variants already exist, including BASIC (OECD, 2019), Behaviour Change Wheel (Michie et al., 2011), BEWork practices (Barr et al., 2022), etc. They all are based on some stages of scientific research and give straightforward guidelines (see Table 2 for more details).

Moreover, they are structurally similar to ubiquitous management practices such as Six Sigma's DMAIC method (de Mast & Lokkerbol, 2012), Root Cause Analysis (Percarpio et al., 2008) or Design Thinking (Dunne & Martin, 2006) by following a process of diagnosing a situation, analyzing it, and A/B testing solutions. Although different practices highlight different steps of the process, all reflect the growing importance of experimentation in companies (Campbell et al., 2022; Thomke, 2020).

**Table 2**
Nine Steps to Implement Evidence-based Behavioral Interventions in Organizations.

| Step | Description | Organizational specifics* |
|---|---|---|
| 1. Involving stakeholders | Invite stakeholders to define and analyze issues and eventually design interventions using their knowledge to foster ownership, commitment, and motivation. | Have a high-status champion of behavioral interventions within the organization. |
| 2. Diagnostics phase | Analyze and diagnose factors influencing unwanted behavior in a specific context to develop customized solutions tailored to individual thinking styles and situations. | Factors will be at individual, team, and organizational levels. You cannot change one type and hope that the others are inert. |
| 3. Establish precise behaviors-to-change | Identify the behaviors that need to be changed and diagnose psychological or situational factors influencing decisions to develop contextually appropriate interventions. | It is usually insufficient to nudge specific individual behavior; you must account for the whole interaction architecture in an organization. |
| 4. Develop interventions based on principles | Base interventions on replicated, heterogeneous population-tested principles of how the human mind works in group settings and support *meta*-abilities for long-lasting behavioral change. | Empowering or training decision-makers without nudging them into a particular option is better. |
| 5. Building interventions | Develop interventions based on a thorough diagnosis and understanding of the context. | Have detailed knowledge of the employees' underlying motivations or preferences in a specific context. There are no universally effective nudges. |
| 6. Testing (or evaluating) interventions | Test (or evaluate) interventions to learn from successful and unsuccessful attempts and collect data for analysis. | Have a proper control group. In an organization's dynamic and distinctive environment, past behavioral patterns or current behavioral patterns from a different group are not ideal. |
| 7. Implementation and scaling | Use data analysis to guide implementation and scaling plans, revealing the effectiveness and impact of interventions. | It is possible to systematically build a body of knowledge because long-term data can be collected and triangulated. Are you collecting all the data so that you can say why did the intervention not work? How could it have worked better? |
| 8. Iteration and optimization | Iterate the process to scale successful interventions or reassess and restart the process if necessary, refining strategies based on data. | Is the intervention scalable – i.e., can it be used elsewhere, in the long term, sustainably, and cost-effectively? If not, why experiment with it? |
| 9. Promote a culture of experimentation | Encourage employees to embrace learning, innovation, and continuous improvement for a more agile and adaptable organization. | It's prohibitively expensive not to experiment. How many organizational failures can be laid at the feet of insufficient investigations and tests? |

* Note: The following sources served as inspiration (Gneezy & List, 2013; List, 2011).

First, practitioners should observe and diagnose which factors influence behavior in a specific context during the diagnostics phase. A seminal contribution of the nudging movement is bringing the perspectives of different sciences to diverse factors that can impact people's choices. Social psychology focuses on the influence of social factors on individuals' thoughts, feelings, and behaviors. Practitioners can examine group dynamics, social norms, conformity, and the impact of social roles on behavior. Cognitive sciences emphasize the role of mental processes, such as attention, memory, and problem-solving in shaping behavior. Practitioners can investigate the cognitive mechanisms underlying decision-making, attention focus, motivation, and goal-setting. An anthropological perspective can provide valuable insights into the cultural and group factors that shape behavior. Practitioners can explore how norms, beliefs, and values influence employees' actions and attitudes (Mažar & Soman, 2022).

The diagnostic phase enables the development of customized solutions tailored to individual or group thinking styles and situations. By establishing precise behaviors-to-change and diagnosing factors influencing these behaviors, practitioners can develop contextually appropriate interventions and creative adaptations of robust and validated interventions. Behavioral change is doomed to failure without a detailed understanding of the context and tailoring the intervention to specific organizational conditions (List, 2011). Therefore, the first step must be a thorough individual and organizational diagnosis, which allows one to select or adapt the most effective interventions.

The next stage involves building and testing these interventions. Testing allows organizations to learn from both successful and unsuccessful interventions. The results can then guide scaling plans (Al-Ubaydli et al., 2021), revealing the effectiveness and impact of various interventions. Lastly, iteration of this process enables organizations to scale successful interventions or reassess and restart the process if necessary. By conducting experiments and collecting data, organizations can identify areas for improvement and refine their strategies accordingly. This ongoing process ensures that interventions are optimized over time, making them more effective and adaptive to changing circumstances.

### 5.1. Organizational behavioral interventions specifics

Indeed, organizational behavioral interventions have specific challenges (Brockner & Sherman, 2019; Lambert et al., 2022). In particular, by involving stakeholders in defining, analyzing, and designing interventions, organizations can use their knowledge and foster a sense of ownership and commitment among them. Having a high-profile champion to push for valid experimentation is critical (Howell & Higgins, 1990; List, 2011) because they can lead to increased motivation and support for behavioral change initiatives. On the other hand, even a simple, helpful intervention can be drowned in a conflict of interest between stakeholders.

Behavioral interventions usually aim to change individual behavior. However, in organizations, individuals cannot be nudged systematically while the organizational processes do not change. For example, a study (Lee et al., 2020) is a case for organizationally relevant behavioral intervention. It examined an implementation of Collaborative Work Time intervention, which consists of managers and employees collaborating on a non-routine task framed as work that builds skills or knowledge. Employees were expected to choose managers they wanted to speak with, initiate scheduling the call, and then work on the task. The second aspect of the intervention asked the entire team to hold a weekly facilitated team meeting. The goal of these meetings was to create an opportunity for the whole of the team to engage in discussions about work challenges. The intervention led to the emergence of positive relational dynamics in the team.

Unlike choice architecture, i.e., nudging individuals towards a specific outcome, in organizations, it is necessary to implement complex "interaction architecture" to change the processes (Lee et al., 2020) – i.e., re-structuralization of the way individuals within the organization interact with each other in the organizational processes (Lambert et al., 2022). Organizational nudging must recognize that organizational behavior change is not solely about influencing individual choices but also about transforming the social and structural context in which these choices are made (Mols et al., 2015). This approach thus has to go beyond traditional behavioral interventions by embedding behavioral insights into the design of organizational processes, roles, and norms. It involves a holistic consideration of how work is organized, information flows, and decisions are made, ensuring that these elements collectively support the desired behaviors.

Moreover, organizational decision-making is notoriously different from individual decision-making. It involves multiple people in the process, which increases complexity and diversity of opinion but may also lead to groupthink (Esser, 1998), is subject to approval and control, which reduces errors but can lead to rigidity (Nemeth & Staw, 1989), is dependent on changing market conditions which introduces considerable uncertainty into outcomes, but also opportunities, etc. (Josefy et al., 2015).

By promoting a culture of experimentation and data-driven decision-making, organizations can encourage employees to embrace learning, innovation, and continuous improvement (Campbell et al., 2022; Camuffo et al., 2020). This mindset can lead to a more agile, adaptable organization better equipped to respond to changing conditions. On the other hand, it is not possible to experiment with everything; experimentation is costly in terms of money, time, attention, or sense-making, and therefore, it is necessary to consider under which conditions real benefits can be expected, i.e., if the intervention can be cost-effectively scalable (Azevedo et al., 2020).

Interventions must be developed based on replicated, heterogeneous, population-tested principles of how the human mind works and under what conditions it can make systematic errors from which it may not learn (Bryan et al., 2021). Interventions should support *meta*-abilities, i.e., learning to think about choices, not just how to make a particular choice (Hertwig & Grüne-Yanoff, 2017). A context-dependent intervention, targeted only at one specific time or situation, can have a positive impact but does not lead to sustainable organizational practice. Interventions that lead to acquiring a new skill, learning to work with new technology, and gaining insights will be sustainable (Brandon et al., 2017). The measures then will not be based on a fad, a surprise factor, unusualness, or psychological oddities that may entertain but may lead to long-lasting behavioral change.

## 6. A validation study

I conducted a preregistered qualitative validation study to show the relevance of the proposed framework of why nudging or behavioral interventions may be just a façade in organizations. This study aligns with the grounded theory methodology described by Strauss and Corbin (2015). However, its primary aim is not to develop a new theory but to (dis)validate the proposed conceptualization of nudges as behavioral change tools within organizational settings (Sousa, 2014), as outlined in this article.

### 6.1. Method

#### 6.1.1. Sample

I sampled managers from Czechia, Germany, and Slovakia who have experience implementing nudges or behavioral interventions (for participation in focus groups and interviews) and consultants in the field (for participation in interviews). I used an university's alum network, LinkedIn ads, and personal networks. See Table 3 for an overview of the sample.

The sample of consultants was selected based on the criterion that they have advised, implemented, or evaluated nudge or behavioral interventions in organizations for at least four years. I recruited five

**Table 3**
Overview of Interviewees and Participants.

| Sample Category | Interview or Focus Group | Description | Code |
|---|---|---|---|
| Managers ($N = 12$) | | | |
| | FG | Marketing and Sales Team Leader in a software company | M1 |
| | FG | Head of Sales in a software company | M2 |
| | FG | Senior Product Manager in a product management service company | M3 |
| | FG | CEO in a healthcare company | M4 |
| | FG | Head of Product in a software company | M5 |
| | FG | Chief Business Officer in a software company | M6 |
| | FG | Head of Product in a software company | M7 |
| | I | CEO of a clean energy company | M8 |
| | I | Partner in a clean energy company | M9 |
| | I | Senior Finance Manager in a construction company | M10 |
| | I | Compliance Manager in an accounting company | M11 |
| | I | CEO in a marketing company | M12 |
| Consultants ($N = 5$) | | | |
| | I | Junior Consultant with experience in behavioral interventions, UX, and people analytics in a large consulting firm | C1 |
| | I | Freelancer specializing in design and A/B testing of motivation programs and communication strategies | C2 |
| | I | Partner and Senior Consultant of a large consulting firm | C3 |
| | I | Freelancer with an academic position specializing in behavioral interventions | C4 |
| | I | Senior Consultant of a large consulting firm | C5 |

consultants, two of whom were women. Their age ranged between 31 and 42 years.

For the sample of managers, I first chose a focus group method (Coule, 2013) to gain insight into the perceptions of applying nudges in organizations. Respondents were selected based on the following criteria: they must be managers in a company with at least 20 employees and have experience applying nudges or behavioral interventions. We recruited seven managers. All participants were male. Their age ranged between 24 and 32 years. The other part of the sample was interviewed, and respondents were selected based on the same criteria. We recruited five managers, one of them was a woman. Their age ranged between 34 and 48 years.

#### 6.1.2. Focus group

In the preparatory phase, we created a scenario for a focus group discussion. In addition to instructions to an independent moderator, this scenario contained a list of basic rules for the discussion, a set of open questions, and a brief description of the objectives of each part of the discussion, such as 1) the participants' opinion on the use of nudging, 2) what they consider to be the advantages and disadvantages of nudging, and 3) a discussion of areas where nudging is worth using and where it is not.

Before the start of the focus group, all participants were briefed on the study's methods and consented to participate. The focus group was held online through the Zoom platform. The entire discussion was recorded using this tool and took one hour.

In the introduction to the focus group discussion, the basic rules of engaging were presented to ensure that each participant had sufficient space to express their opinion. Afterward, we introduced nudging as a concept and started the discussion. In the next phase, we used open-ended questions to find out how participants perceived the use of nudging in their companies. The moderator supplemented the outline with questions arising from the resulting discussion, building directly on the participants' statements. Finally, the main points of the discussion were summarized, and participants were given space for questions and final observations.

#### 6.1.3. Interviews

A series of interviews with consultants and managers were conducted for this study. Before these sessions, all interviewees were briefed on the study's methods and consented to participate. The interviews were conducted face-to-face or through Zoom, depending on the interviewee's preference. While the initial plan was to audio-record all sessions, most interviewees opted to record the interview using just the interviewer's notes.

The length of these interviews ranged from 15 to 65 min, with an average duration of 47 min. The interview framework was structured around three areas: 1) the demographic and professional backgrounds of the participants, 2) their understanding and experience with nudges and related behavioral interventions, 3) in-depth discussions on the effectiveness and measurement of nudges, strategic organizational use, ethical implications, employee autonomy, challenges, limitations, and the future role of nudges in organizational contexts.

The interview process was flexible, tailored to each participant's knowledge and willingness to engage, and evolved based on the flow of the conversation. Participants were initially invited to freely express their thoughts on the essence, benefits, and drawbacks of using nudges or behavioral interventions in addressing organizational challenges. Following this open-ended discussion, the conversation was steered toward specific factors identified earlier in this article to deepen the exploration of these topics. All relevant materials used during the interviews are archived in the study's files and are accessible through the Open Science Framework (https://osf.io/q25de).

#### 6.1.4. Data analysis

We combined the data from the interviews and the focus group as they were not distinctive. In line with the grounded theory approach, we employed a concurrent approach for gathering, transcribing, and encoding interview data, utilizing MAXQDA software (Kvale, 1996; Strauss & Corbin, 1994). The analysis of this data was structured in a tripartite manner. Initially, I engaged in open coding, where each segment of the transcripts and notes was succinctly summarized to identify distinct data elements. This was followed by an aggregation phase, where these initial codes were amalgamated so that they could be later compared to the theoretical constructs of the proposed framework. The culmination of this process was the development of Table 4. This table systematically organizes the themes and factors identified by interviewees and focus group participants, offering a framework that delineates both the positive and negative implications of employing nudges or behavioral strategies to address the immediate and strategic challenges faced by organizations.

### 6.2. Results

#### 6.2.1. General findings

There was a notable lack of clarity or agreement about what a nudge or a behavioral intervention means as a separate concept; they were perceived as any way of influencing people: "If I give someone advice… or if I change the wording in the email to be more persuasive… or even training… all these are nudges, right?" (M11); "Nudge is a cool meme

**Table 4**
Overview of the Positive and Negative Aspects of Applying Nudges (or Behavioral Interventions) to Solve Organizations' Short-Term and Long-Term Challenges.

| Factor (category and subcategories) | Positive Aspects | Negative Aspects |
|---|---|---|
| Management Fad | | |
| • Discovery | – Fresh perspectives and enthusiasm<br>– Opportunity for early adopters to lead and inspire<br>– Potential for groundbreaking solutions with clients, with boards, with anyone<br>– Increased engagement, curiosity, and creativity | – Overestimation of the concept potential<br>– Absence of critical evaluation<br>– Novelty and 'fun factor' overshadowing substance<br>– Neglect of existing or other more effective practices |
| • Wild Acceptance | – Rapid adoption and widespread usage<br>– Quick wins<br>– Increased visibility of 'nudge' initiatives<br>– C.V.s with successful projects that are just simple nudges | – Uncritical adoption<br>– Overlooked adverse side effects<br>– Bandwagon effect leading to poor decision-making<br>– Rosenthal effect leading to a numbers game<br>– Dilution (absence) of the concept's core principles |
| • Digestion | – Refinement and customization<br>– Opportunity for feedback and improvement | – Loss of initial excitement<br>– Misinterpretation or oversimplification of the concept<br>– Absenting framework: 'Nudge is everything and nothing at once.' |
| • Disillusionment | – Critical reassessment and improvement<br>– Shedding of unrealistic expectations<br>– Recognition of limitations and challenges | – Cynicism and rejection of valuable aspects<br>– Loss of trust in 'nudge champions' or the concept<br>– Wasted resources, time, and efforts |
| • Plateau of Productivity | – Realistic expectations established<br>– Demonstrated benefits in specific cases<br>– Foundation for continuous improvement using A/B testing (experimentation) | – Complacency or stagnation<br>– Diminished returns or impact over time |
| Management Practice Effectiveness | | |
| • Evidence-based Management | – Data-driven decision-making enhances accuracy<br>– Reduces reliance on intuition or tradition<br>– Promotes accountability | – Selective usage<br>– Selective reporting<br>– Data misinterpretation or biased analyses<br>– Ex-ante recommendations without effect sizes or contextual factors |
| • Ready to Apply | – Clarity of usage and direction of influence<br>– Readiness for (small) change initiatives<br>– Immediate impact | – Overconfidence in approach<br>– Underestimation of challenges<br>– Ignoring context |
| • Defining the Output | – Clear goals and benchmarks<br>– Enhanced accountability<br>– Better communication of expectations | – Missing vision, larger goals<br>– Narrow focus, neglecting broader impact<br>– Pressure and stress from high expectations<br>– Misalignment with individual or team capabilities |
| • Measuring Effectiveness | – Tangible assessment of impact<br>– Data-driven decision making<br>– Enhanced understanding of nudge impact | – 'Good-will assessment'<br>– Missing measures and impact assessment<br>– Missing broader context, dynamism, downstream effects<br>– Pressure to show interesting or expected results<br>– Pressure to show immediate results (ignoring down-stream or long-term effects) |
| Impact on individuals (long-term v. short-term) | | |
| • Quick Wins and Error Correction/Good Practice Promotion | – 'Use it to get clients where we want them.'<br>– Reduces cognitive biases by prompting more rational decision-making in employees<br>– Helps in identifying and mitigating common mistakes and inefficiencies<br>– Promotes a more evidence-based approach to decisions | – Potential for overconfidence in 'nudged' decisions<br>– Creating new biases<br>– Dependence on nudging promotes reactive approaches, which may reduce critical thinking skills<br>– Nudges oversimplify complex issues |
| • Learning and Decision-making | – Encourages informed decisions<br>– Stresses thinking about the thinking of others | – Does not lead to improved long-term decision-making capabilities<br>– Does not promote adaptability and flexibility<br>– Does not foster a culture of knowledge-sharing<br>– Create a mindset of 'quick solutions' (that are usually not working) |
| Impact on organizational and business processes | | |
| • **Strategy and Organizational Development** | – Highlights situations where people can make mistakes or be biased<br>– Promotes a proactive rather than reactive approach, e.g. training to avoid errors or mistakes<br>– Teach 'psychological ways' of managing people | – Absenting organizational framework<br>– Does not promote a holistic approach to organizational development<br>– Overreliance on simple nudges<br>– Oversimplify complex organizational issues<br>– Lead to a one-size-fits-all approach, ignoring unique departmental or team or individual needs<br>– Possible underestimation of the complexity of changing organizational mindsets |
| • Ethics and Autonomy | – 'It's a tool; it depends on how you use it.'<br>– Should respect and enhance individual autonomy<br>– Enhances organizational reputation | – Perceived as manipulation<br>– Tension between individual and organizational ethics<br>– Overemphasis on compliance over ethical reasoning<br>– Challenges in balancing autonomy with organizational needs |
| Future of nudging (behavioral interventions) | | |
| • Experimentation and Evidence-based Culture | – Promotes a culture of experimentation and continuous learning<br>– Enhances the ability to measure impact and outcomes | – Data misinterpretation or bias<br>– Possible neglect of human intuition and experience |

(*continued on next page*)

**Table 4** (*continued*)

| Factor (category and subcategories) | Positive Aspects | Negative Aspects |
|---|---|---|
| | | – Challenges in maintaining a balance between experimentation and operational stability |
| • Integration | – Uses soft techniques of motivation and leadership (appreciated by Generation Z)<br>– Enhances effectiveness and efficiency in some tasks<br>– Encourages critical thinking | – Overemphasis on behavioral interventions at the expense of other strategies<br>– Possible dilution of the impact of nudges due to widespread application |

because nudge is what costs nothing and works. Who wouldn't want that? You simplify the form; it's a nudge. You improve in UX; it's a nudge. You need to dig a hole, and you put a shovel in employees' hands so they don't have to do it with their bare hands; it's a nudge" (C2); or "I understand that a nudge cannot be a command, but just a recommendation or even a hint from a manager can be seen as a command. On the other hand, systematically, without an explicit command, you can nudge employees through training, mentoring, guidelines, or shaming… a nudge can be anything" (C5). This fluidity of the concept must be reflected in the interpretation of applying nudges in organizations described below.

#### *6.2.2. Nudge as a management fad*

Within the managerial fad category, there was a difference between the sample of consultants and managers. Consultants described the nudge movement as a fad cycle, now slowly coming to the last parts of disillusionment or a plateau of productivity. Managers appeared to be at various stages of the cycle, mainly depending on how long or extensive their experience with behavioral interventions had been.

Initially, the nudge was perceived as a panacea in the discovery phase. The consultants described its public beginning in the form of gold fever: "Companies wanted 'Ariely's magic.' It was a magic wand for them. I pretty much dampened this irrational enthusiasm, but they didn't want to hear about it" (C3); or "They found about nudges and behavioral economics from popular books or TED talks and thought it was a magic solution for everything that worked everywhere" (C1). Managers were enthusiastic about the concept and mentioned how they use anchoring, default, framing, social proof, and other nudges and how they work, although acknowledging they usually don't create a benchmark or a control group to compare the outcomes to: "Whether externally, to clients or suppliers, or internally, to employees, we use the nudges everywhere" (M9).

In particular, the persuasive power or marketing excellence of the concept "nudge" was appreciated: "The nudge is an ideal term because it's a shortcut – you don't need budget, time, or people to make changes. […] It's a vehicle to help drive change – understandable, impactful, and compelling" (C3); or "Nudge or behavioral economics are buzzwords in the business. […] These approaches have managed to give the impression that they can do something unique beyond conventional thinking. Magical" (C4). Nudges were also an opportunity for career advancement and visibility within the organization, e.g., "You just change a few wordings in an email, and suddenly you have a super-successful behavioral project. Some people put it on their C.V.s" (M11).

Applying nudges was non-critical in the wild acceptance phase; a problem was identified, and a nudge was tried. Universally, there was no situational appraisal or complex planning with A/B testing of different nudges. By trying various nudges, some of them worked, which was taken as a proof of concept: "There have probably been many more attempts, but I remember the successful ones, default settings for sick leave or 401 k plans" (M10); or "When you hire consultants to improve a process, naturally more attention is paid to that process, something like the Rosenthal effect is created, and some improvement always occurs or at least is presented as such" (C1).

In the digestion phase, especially according to the consultants, it was clear that famous nudges often don't work, their effects are heterogeneous, or they have to be applied only to narrowly defined and simple problems – like reminders or default assignments to training. They are not very useful for complex workloads, prioritization, motivation, or project management issues: "If people don't check in [for training] and you remind them, they will check in – that works, but that's low-hanging fruit. Those people aren't the problem; it's the employees who have the real issues – overworked, burned out, quite quitting; a nudge doesn't work on those. You need a whole different level of persuasion on them" (C2); "Nudging won't get you into strategic balance. Reminders work, OK, so you start sending more and more of them and overwhelm people eventually. You must get to the beginning, which is a prioritization decision – nudges are mute here" (C5).

Phases of disillusionment and a plateau of productivity followed, where more thought was given to applying nudges. Situations were identified where nudges might work best or at least were used for a targeted segment that showed predictable errors. Gold rush ended: "Nudging is no longer promoted [by the consulting industry]. The concept has run out of steam; it has no voice anymore" (C5); or "Nudge is good where there are no significant downstream effects, no big interactions with other stimuli, etc. Anything more complex needs a more complex framework" (C3).

#### *6.2.3. Management practice effectiveness*

At its core, nudging was lauded by managers and consultants for its commitment to A/B testing ideas and data-driven decision-making, significantly enhancing managerial actions' accuracy. However, scrutiny revealed issues such as selective usage and reporting of data, where managers or consultants cherry-pick just favorable examples. Selective reporting is a norm, highlighting successes while underreporting failures or mixed results. In practice, the integrity, intensity, or complexity of analytical processes may depend more on organizational characteristics than on a nudge approach.

The readiness to apply nudges was recognized as a clear advantage. Nudges are valued for their straightforward usage and facilitation of small-scale change initiatives with the potential for immediate impacts. However, this readiness is often accompanied by an overconfidence in the nudging approach, a notable underestimation of the challenges involved, and a disregard for the contextual nuances that critically influence outcomes. M1 gave an example of a donation campaign where constant reminders led to staff getting upset rather than supporting a targeted cause: "Every day, we received notifications of how much someone had donated [to Ukraine], and there was actually a kind of strong social pressure on us"; M3 mentioned a similar example of an unsuccessful nudging vaccination campaign in his company: "When it comes to health, not everyone wants to share, and some employees are even offended that we nudge them to get tested or get vaccinated.".

Clarity of nudge usage was valued as well. A goal is set, a simple nudge is used, and the consequences are immediately apparent. The process of setting clear goals and benchmarks, enhancing accountability, and better communication of expectations stands out as a beneficial aspect of nudging: "What companies want from us is a menu of possible solutions – a list of 'if you do this, the result will be this,' they are not interested in nuances" (C1). However, the recurring issue was the absence of a broader vision and larger goals, leading to a narrow focus that overlooks the context or downstream implications of nudges: "Sometimes, nudges work by luck. Once, I wanted to push my colleagues to speed up, so I sent them a really long screenshot of what was pending

in my approval list as a reminder. But if a supervisor hadn't yelled 'Fuck!' at the entire floor, and gave my message the intended meaning [to nudge them to intensify their work], I might well have just normalized mine and their procrastination" (M8).

The aspect of measuring the effectiveness of nudges reveals a mixed picture. If the impact of a nudge can be measured simply, it is measured, i.e., in marketing campaigns, information mailings, etc. The more complex it is to assess whether a nudge works, the rarer it is evaluation: "Some nudges are evaluated, KPIs are set, and you can see whether the project has met them or not, especially in marketing campaigns. This is not common in organizational projects or business development projects. Managers want to convince the board that the project will deliver results, and complex and detailed data is often not what convinces them" (C3).

The tangible assessment of impact, reliance on data-driven decision-making, and an improved understanding of the nudge impact were highlighted as significant strengths. On the other hand, the approach was criticized for its lack of comprehensive measures, impact assessments, and oversight of the broader context and dynamism inherent in such interventions. Moreover, in companies, there is pressure to produce interesting or expected results and demonstrate immediate successes, often at the expense of acknowledging downstream or long-term effects: "There is a huge heterogeneity in people, in teams, in situations, in time. You can't often tell under what conditions something will work. […] of course, you only present what works" (C5).

#### 6.2.4. Impact on individuals (long-term v. short-term)

Applying nudges was seen as an ideal tool to guide clients or employees toward desired outcomes, effectively reducing cognitive biases leading to suboptimal outcomes (for a company). Nudging notoriously aided in identifying and mitigating common biases, mistakes, and inefficiencies: "Simplification is a super nudge. Make people's decisions easier by simplifying the situation for them" (M8); or "Framing changes your thinking because you realize that how you present a situation will affect how people experience it. […] There's no point in sending information, I'm sending maps now" (M12); or "The most effective nudge is the default. If you want people somewhere, you put them there, they usually don't leave" (C4).

Despite these benefits, interviewees mentioned that such practices do not necessarily improve long-term decision-making capabilities or promote a firm's adaptability, flexibility, or knowledge-sharing culture (or, on the clients side, has a longer-term effect on their behavior). Instead, there's a risk of fostering a mindset geared towards seeking quick solutions, which may not be effective or sustainable in the long run. Also, reliance on nudges may inadvertently lead to overconfidence in the decisions influenced by nudges, a dependence on nudging that may diminish critical thinking skills, and an oversimplification of complex issues: "In my experience, most popular nudges don't work. […] In certain well-defined conditions, yes, but usually not – because the other factors are much, much stronger. It's naive to think that when it comes to some big decision, for people who have experience making that decision, [a simple nudge] will have some giant effect. Reality is full of noise" (C4).

#### 6.2.5. Impact on organizational and business processes; ethics of nudging

The interviewees' most critical view was in applying nudges to organizational processes or business development projects. The critique centered on behavioral interventions' absence of a comprehensive organizational framework, indicating a failure to foster a holistic approach to organizational development: "You could say nudging is a philosophy of 'Don't command but manipulate people to want it themselves.' – but it's not sophisticated enough to make it a management model. It doesn't give you a management philosophy" (C2); or "If you work with people, you cannot ignore psychology, motivation theory, behavioral theories, so every manager uses [nudging]. However, behavioral interventions don't give a clear framework for business or more complex endeavors. If a manager reads Nudge or Kahneman's Thinking, Fast and Slow, he can get inspiration on what to do or how to do it differently, but nudging does not give a guide on how to run a team or a business" (C3).

The overreliance on simple ad hoc nudges was seen as a critical flaw, as it may oversimplify complex organizational issues and lead to a one-size-fits-all strategy that disregards the unique needs of different departments, teams, or individuals: "If you send some [headquarter-relevant] nudge to the whole company you might irritate people who work from home because it's out of their hands" (M2); or "It seems to me that [nudging] doesn't account for segmentation, the differences in people. You can't communicate with everyone the same way; different groups have different priorities, language, knowledge" (M12).

The problem of nudge inadequacy may be that organizational issues are consequences of group dynamics, multi-level coordination, interpersonal trust, etc., and such characteristics make it problematic for simple interventions. However, such may also exist: "I think the best organizational nudge is training. Starbucks, for example, teaches, 'Your apron is a shield. Nothing anyone says will ever hurt you.' Once employees embrace that, they'll perceive customers differently, and as a group, they will be pushed to become better employees" (C5). Additionally, there's a concern that nudging might underestimate the complexity of altering organizational mindsets, suggesting a potential gap in addressing more profound, systemic challenges.

However, interviewees agreed that the underlying idea behind behavioral interventions should be incorporated into any corporate strategy: "Nudges nudge you to focus on the fact that employees are making mistakes, and where they are most likely to make them so that you can direct decision support there. Put some software solutions in there, suggest double-checking, etc." (M8).

The ethical dimension of using nudges is complex, resting heavily on the manner of their specific application. While these tools can respect and potentially enhance individual autonomy, contributing positively to an organization's reputation, they also face criticism for being perceived as manipulative: "We're dealing with how to conceive of working from home policies; we certainly want to offer it to employees, but many people use it in ways that are clearly not that productive. We thought of a few ways to nudge them to come to work more. But it's clear that they will see through the fact that we want to manipulate them" (M9).

This perception introduces a tension between individual and organizational ethics, where the emphasis on compliance may overshadow ethical reasoning: "Employees or clients can quickly come to the perception that they are being manipulated. Nudge is about an architecture of choice without coercion. There are many instances of creating extreme identification with a group, even sectarianism, which would also fall under nudging" (C5).

The challenge lies in navigating the fine line between leveraging these practices to guide decision-making and respecting individual autonomy, ensuring that the pursuit of organizational objectives does not compromise ethical standards: "When we give employees something for free, exercise machinery, fruit, coffee, whatever, we don't do it in a manipulative way to build a need for reciprocal behavior. Yes, it can be interpreted that way, but it can also be seen as simply that we want them to enjoy the work and the environment to be pleasant" (M9); or "Nudge is not manipulative. I don't see any ethical threat. It's a description of how to interact effectively with people – if I lie to someone and call it a nudge, it's understandably objectionable. However, emphasizing or omitting some information is how we, as humans, operate. Using it to help people make better decisions, without any coercion, then it is not unethical" (C4).

#### 6.2.6. Future of nudging (behavioral interventions)

The future of nudging and behavioral interventions in management and organizational practices was, according to the interviewees, characterized by two main themes: the promotion of an experimentation and evidence-based culture and the challenges and opportunities associated

with their integration into broader management strategies in times of changing values of generations, big data, digitalization, and AI: "Generation Z is really different, they don't believe in authority, orders, hoarding of money. They want to do meaningful work and live more deeply. That's where the nudge movement is visionary because it's not about commands or money; it's about using psychological insight. It simply gives alternatives to directive leadership or sales offers focused only on monetary benefits" (M8).

The forward trajectory of behavioral interventions emphasizes a culture that values experimentation and continuous learning. This approach is instrumental in enhancing the ability of organizations to measure the impact and outcomes of their actions, thereby fostering a more data-driven decision-making process: "Alongside the enormous availability of data, digitization or AI, nudging is another factor in the development of evidence-based decision-making. The explosion of data has made evidence-based management possible. The nudge movement has helped in what all could be explored, giving inspiration as to what everything, however insignificant, can have an effect" (C3); or "Knowing how to do behavioral interventions properly provides an edge and can lead to pushing A/B testing on a larger scale, which definitely adds value to any organization" (C4). However, interviewees also argued that an overreliance on data and experimentation may inadvertently lead to neglecting human intuition and experience, which have traditionally played a crucial role in decision-making processes.

### 6.3. Discussion

The study results imply that all aspects of our proposed conceptual model of applying nudges within organizational settings are valid. Industry professionals perceive nudging (and behavioral interventions in general) as lacking coherence, encompassing a broad range of communication, persuasive, motivational, training, and other behavioral and management techniques. The overstretching and fuzziness of the concept of nudging (Congiu & Moscati, 2022; Kosters & Van der Heijden, 2015; Selinger & Whyte, 2011) is coupled with the tendency to define nudges by successes while underreporting or ignoring failures, which reflects a broader issue in organizational decision-making, where the pressure to demonstrate immediate success can overshadow the importance of comprehensive and objective evaluation and possibility of learning from it.

The image of nudging as a management fad was suggested by a pattern of adoption characterized by uncritical enthusiasm followed by disillusionment—a phenomenon well-documented in the management literature (Abrahamson, 1996; Gibson & Tesone, 2001; Miller et al., 2004). The initial allure of nudging, driven by its simplicity and cost-effectiveness, echoes the appeal of innovative practices that promise significant impacts with minimal resource investment (Benartzi et al., 2017). However, the disillusionment phase, where the context-dependent nature and limitations of nudging become apparent, particularly in addressing complex organizational challenges, stresses the need for a more complex framework or more specific understanding of its application, which is not present in corporate knowledge management, but also in the academic literature.

As noted by the interviewees, the application of nudges in organizational contexts lacks a comprehensive framework, echoing the classical concerns of March regarding the complexity of managerial decision-making and the limitations of simple rules (March 1991; Nielsen et al., 2018). While nudging has been praised for highlighting the importance of focusing on how employees (or clients) make decisions, that they can often make mistakes, and that it is appropriate to help them, it also does not guide how to manage organizations, groups, or teams better (but see Mele et al., 2021).

The ad hoc and heterogeneous impact of nudging on individuals and organizational processes further complicates its implementation. As highlighted by the interviewees, while nudging can effectively guide behavior toward desired outcomes by mitigating cognitive biases, streamlining decision-making by simplifying the problem, defaulting employees to where they want to be, etc., its effectiveness in fostering long-term decision-making capabilities may remain questionable (Gigerenzer, 2000). Nudging is focused on an outcome of a particular behavior but does not improve the decision-making processes; thus, overreliance on behavioral interventions may inadvertently undermine the improvement of organizational processes, creation of valuable heuristics, and critical thinking (Gigerenzer & Gaissmaier, 2011; Smith et al., 2013).

Integrating nudging into broader management strategies, especially in the context of changing generational values and technological advancements, presents challenges and opportunities. As noted by our interviewees, the emphasis of behavioral interventions on experimentation and evidence-based management culture aligns with the growing trend toward data-driven decision-making in companies (Szukits & Móricz, 2023). However, the interviews also revealed that testing and evaluation of behavioral interventions do not correspond to rigorous assessment and are characterized by the absence of a control group, selective reporting, and focus on immediate, narrow, and visible outcomes. Yet, proper training or education in the scientific approach to managing organizations improves managerial precision and productivity (Camuffo et al., 2020); for a summary of the recommendations, see Table 5.

Like any study, this one has its limitations. The study focused on managers and consultants from Central Europe, which may limit the generalizability of the findings. These countries' cultural and organizational contexts do not fully represent global corporate environment diversity (Bloom et al., 2012). Expanding the sample to include participants from a broader range of countries and sectors could enhance the understanding of nudging's applicability and effectiveness. While the qualitative approach provides insights into the perceptions and experiences of individuals, it lacks the sources necessary to measure the effectiveness and impact of nudging in organizational settings. The reliance on interviews and focus groups may also introduce biases based on the participants' self-reporting and the researcher' interpretations, especially when data triangulation was not possible (Gibson, 2017). Also, the study aimed to validate a conceptual model rather than develop a new theoretical framework. This approach may overlook emerging concepts and theories that could offer a more diverse understanding of nudging and its limitations in organizational contexts.

**Table 5**
Implications for Organizations: How to Avoid Behavioral Interventions Being Just a Façade.

| Behavioral Interventions Maxims | Description |
|---|---|
| Educate and Train Managers | Organizations should provide training and resources to managers to ensure that nudges are tested and implemented based on evidence and best practices rather than folk beliefs. |
| Need for Comprehensive Systems | Successful behavioral changes in organizations often require a comprehensive system incorporating individual and organizational interventions to elicit new habits and identities and use reinforcing technologies. |
| Focus on Long-Term Outcomes | Interventions should not just seek immediate short-term effects but aim for long-term organizational learning. |
| Continual Experimentation | Organizations should adopt a scientific approach to nudging, which involves continually testing and refining scalable evidence-based interventions. |

## 7. Conclusion

When we look at case studies of successful transformation or systematic behavioral changes, leaders did not merely introduce a few nudges or short-term changes. Instead, they implemented a comprehensive system incorporating new habits, identities, and mutually reinforcing technologies. Our framework on organizational nudging, and the qualitative study that validates it, shows that behavioral change promoted in an organization should aim to bring about robust, sustainable, contextualized outcomes that are directed at the organizational dynamics, not just an individual. Interventions should not just seek immediate short-term behavioral effects but lead to long-term learning.

Behaviorally informed interventions are most effective when they address "the right problems, at the right time, for the right people" (Lambert et al., 2022, p. 5). Individual or team-level nudges must be customized to address distinct circumstances. Such behavioral changes can be achieved if leaders diagnose the problem, design and test measures, and evaluate and scale them if they are successful. I highlighted how organizational nudges differ from simple behavioral interventions targeting singular behaviors. Developing broader strategies that are able to address diverse scenarios uniquely embodies the quintessential application of organizational nudges within management practices.

However, our recommendations cannot be fully implemented without follow-up research. Mainly, there is a need to investigate how behavioral interventions can be effectively integrated into comprehensive management strategies. Research could focus on how behavioral interventions complement other management techniques to address organizational challenges. Future research could also benefit from quantitative studies that measure the impact of nudging on organizational outcomes (as most studies are now qualitative; Lambert et al., 2022). Conducting studies in diverse cultural and organizational settings would help understand the findings' universality. Cross-cultural comparisons could reveal how cultural values and norms influence the perception and effectiveness of nudging in organizations (Houdek, 2023). Long-term studies are needed to assess the sustainability of nudging-induced behavioral changes. Such research could explore how nudging impacts decision-making processes and organizational culture over time, addressing the concern that nudging may not foster long-term decision-making capabilities.

Studies could examine how digital tools, AI technologies, and platforms can be used to design, implement, and evaluate nudging interventions in organizational settings (Bammert et al., 2020; Mele et al., 2021). Digital technologies present opportunities for organizations to implement faster, more adaptive, and personalized nudges, leveraging high-frequency, individualized employee data. This capability allows for the dynamic customization of nudges within an organizational context. For instance, the performance of virtual teams might be enhanced by monitoring their collective productivity and nudging the use of individual skills, task strategies, or overall effort (Gupta et al., 2024). Research on digital nudges is advancing with applications that enable precise targeting to promote desired behaviors and diminish undesired ones; for example, users can specify which apps they prefer to avoid; features such as deliberation messages, a brief waiting period, and an option to cancel the app opening help curb impulsive behavior (Grüning et al., 2023). Companies aiming to enhance employee productivity and well-being can integrate these self-nudging apps into their strategies to improve information management and tackle the challenge of limited attention spans. Exploring technology's role in enhancing nudging's effectiveness presents a promising research avenue.

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## CRediT authorship contribution statement

**Petr Houdek:** Writing – original draft, Methodology, Funding acquisition, Conceptualization.

## Declaration of competing interest

The author declares that he has no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## Data availability

The data that has been used is confidential.

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