

Green Nudging and Behavioural Alchemy: Transforming Purchase Intentions into Eco-Friendly Actions

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Abstract

Purpose

This paper develops a theoretical perspective on *green nudging* as a form of behavioural alchemy, proposing how subtle interventions in choice architecture can transform consumers' eco-friendly intentions into sustainable purchasing actions. It addresses the persistent gap between pro-environmental attitudes and actual behaviours.

Design/methodology/approach

The study adopts a conceptual approach, synthesising insights from behavioural economics, psychology, and sustainability marketing to build an integrative framework. It draws upon behavioural theories to explain the mechanisms through which nudges reshape consumer decision-making pathways.

Findings

The paper argues that green nudging functions as behavioural alchemy by reconfiguring decision contexts rather than altering intrinsic motivations. It highlights three core mechanisms—defaults, framing, and social norm cues—that can effectively catalyse the conversion of intentions into actions.

Practical implications

The paper offers marketers and policymakers a theoretically grounded model for embedding sustainability into everyday decision environments.

Originality/value

This work contributes to theory by conceptualising green nudging as behavioural alchemy and advancing a framework that explains how minor contextual shifts can yield transformative effects on sustainable consumption.

1. INTRODUCTION

The increasing environmental imperative has contributed to the intensification of scholarly and policy arguments regarding ways that the consumption public can be motivated to engage in sustainable lifestyles. Consumer behaviour still does not increase in line with expressed pro-environmental attitudes regardless of increasing awareness of climate change, biodiversity loss, and resource depletion (White, Habib, and Hardisty, 2019). This is what is

sometimes called the intention-behaviour gap, and is one of the riddles of sustainability research. Consumers will respond by saying they are willing to buy ecological products, yet when it comes down to the point where the consumers have to make the decision and the option is limited by inconvenience, habit or cost (Carrington, Neville, and Whitwell, 2014). Learning how to close this gap has then become a burning scholarly and business issue. The concept of nudging is one promising avenue based on behavioural economics and popularised by Thaler and Sunstein (2008). Nudges are minor adjustments in the decision-making context that is designed to direct people towards preferred behaviours without limited choice. Green nudging has become a practical intervention within the framework of sustainability to support a behaviour potentially including utilisation of renewable energy sources, less use of plastic, or purchasing items with an eco-label (Schubert, 2017). In contrast to classical persuasive communication or regulation intervention, green nudges work by modifying a choice architecture, which alters the context of decision making but does not change underlying attitudes. Other types of green nudging (such as default options, framing effects, and social norm cues) have been recognized in recent literature. Automatic enrolment of consumers into green energy tariffs has proved to be useful in facilitating sustainable decision-making choices (Pichert and Katsikopoulos, 2008). The perception of sustainability as something to gain or lose also influences behaviour because consumers tend to be sensitive to harm avoidance, rather than seeking benefit (Tversky and Kahneman, 1991). Social norm cues, such as the implication that the majority of people recycle or the implication that your peers use products that are more environmentally friendly, have also worked to motivate the adoption of pro-environmental behaviour (Goldstein, Cialdini, and Griskevicius, 2008). But as the empirical evidence continues to grow, there is little theoretical synthesis of these mechanisms into a coherent conceptual framework. This paper sets green nudging as a kind of a behavioural alchemy - a metaphor to describe the transformative capacity of small interventions to translate pro-environmental intentions into sustainable consumption behaviours. According to behavioural alchemy, nudges do not work by transforming the underlying values of the consumer but by achieving this by reorganising the context of the choice to make sustainable behaviour the least resistant behaviour. Based on the Theory of Planned Behaviour (Ajzen, 1991), Prospect Theory (Kahneman and Tversky, 1979), and the concept of choice architecture (Johnson et al., 2012), this paper creates a conceptual model of how nudges become driving forces in the process of converting intentions to actions. This paper has made a threefold contribution. First, it contributes to theoretical knowledge by conceptualising nudges as behavioural alchemy, through which sustainability interventions can be analysed. Second, it combines the findings of behavioural economics and marketing to suggest an organized system according to which certain nudging mechanisms and their channels of impact are identified. Third, it also highlights the circumstances surrounding the boundary where nudges may be more or less effective, providing space to experiment with it in an empirical and cross-cultural way. Through this re-conceptualisation of green nudging, the paper helps close the long-standing intention-behaviour gap and adds to the overall debate about sustainable consumption. The theoretical insights can help marketers, policymakers, and organisations to design low cost, non-coercive strategies that can entrench sustainability within the day-to-day decision environments. The paper concludes by arguing that as a behavioural alchemy, green nudging has transformative potential in re-imagining consumer behaviour in a sustainable future.

2. LITERATURE REVIEW

The issue of how to fill the gap between environmental concern and actual sustainable behaviour is not new in the field of consumer behaviour research. A useful framework is Theory of Planned Behaviour (TPB) Ajzen (1991), where behavioural intentions are believed to be shaped by attitudes, subjective norms and perceived behavioural control. However, researchers

state that intentions do not necessarily result in behaviour due to situational barriers and habitual consumption behaviour (Carrington, Neville, and Whitwell, 2014). This has now led to the introduction of alternative frameworks, nudging being one of the major strategies. Since Thaler and Sunstein (2008) were early on the nudge theory, they emphasized that only a small modification of the choice architecture would push the direction of choice without necessarily reducing the freedom of choice. Pichert and Katsikopoulos (2008) have demonstrated that in the sustainability setting, default settings, in which renewable energy alternatives have already been determined, can lead to a significant rise in adoption levels. Their results focus on the strength of defaults as behavioural levers, which do not involve a significant effort on the consumer side. To further support this, the prospect theory developed by Tversky and Kahneman (1991) explains why loss-focused appeals tend to be more effective in influencing people into adopting eco-friendly behaviour compared to gain-focused appeals. Green nudging also depends on social norms. Goldstein, Cialdini and Griskevicius (2008) established that guests in a hotel were more likely to reuse towels when they were made aware that most of the other guests were also reusing the towels. This evidence highlights the importance of normative nudges as a means to exploit conformity tendencies to generate sustainable action. Schubert (2017) went a step further and framed the concept of green nudges as a subset of a more extensive range of sustainability-oriented tools that leave consumer freedom intact without requiring strong-handed intervention. This literature is being extended in recent studies. Lehner, Mont and Heiskanen (2016) emphasized the importance of nudges being implemented as part of systemic nudges as opposed to excessive emphasis on individual, behavioural nudges. White, Habib, and Hardisty (2019) also conducted a review of sustainable consumer behaviour studies and suggested that nudges need to be conceived in the context of long-term behaviour change, and not short-term compliance. According to Mertens, Herberz, Hahnel, and Brosch (2022), online nudges (e.g. eco-labels on e-commerce platforms) may also be used to nudge green buying, and thus, the digital choice context may become more relevant. Although these improvements have been made, critics are sceptical about whether nudges can really be used to achieve a lasting change in behaviour. Bovens (2009) described paternalism as ethically objectionable and transparency as unethical, and stated that nudges threaten consumer autonomy. These considerations would subsequently be criticized by Sunstein (2014) who framed nudges as libertarian paternalism with the claim that a well-designed nudge would not only be ethical but also productive. These discussions suggest that a more solid theoretical framing is required, one which explains not merely the effects that nudges have on behaviour, but also in what circumstances they can support eco-friendly behaviour. Taken together, this corpus identifies the possibilities and constraints of green nudging. However, as the empirical evidence has increased, theoretical integration is still weak. This paper aims to bring together current knowledge into a conceptual framework that illustrates the transformational capabilities of nudges in converting sustainable intentions into behaviour by introducing the metaphorical analogy of behavioural alchemy.

3. OBJECTIVES OF THE STUDY

- To develop a conceptual framework that explains how green nudging functions as a form of behavioural alchemy in transforming consumers' pro-environmental purchase intentions into actual sustainable behaviours.
- To critically analyse and integrate existing theories of consumer behaviour, behavioural economics, and choice architecture in order to identify the key mechanisms and boundary conditions that enhance the effectiveness of green nudging interventions.

4. RESEARCH METHODOLOGY

This paper uses the conceptual research approach, which is based on the integrative review of the literature in the field of consumer behaviour, behavioural economics, and sustainability marketing. Critical review of peer-reviewed articles, books, and meta-analyses of major databases, including Scopus, Emerald, and Web of Science, was performed to reveal common patterns, gaps in theoretical approaches, and limitations of the body of research on green nudging. Insights were summarized and a conceptual framework developed using a thematic synthesis approach that presented green nudging as behavioural alchemy. The approach aims to build theory rather than conduct empirical studies, and it aims to advance scholarship and to elucidate future empirical studies.

5. RESEARCH DISCUSSION – 1

The aim of the study first is to construct a conceptual framework to place green nudging in the context of behavioural alchemy, as one offers a new perspective on how target interventions triggered by subtle context can change pro-environmental purchase intentions into sustainable consumption behaviours. The transformative power of nudges as the metaphor of behavioural alchemy suggests understanding that minor tweaks in decision architecture can produce major behavioural effects without the need to alter the values or motivations of consumers. This theoretical stance deals with the long-term issue of intention to behaviour gap, which has been a thorn in the flesh many researchers studying sustainability (Carrington, Neville, & Whitwell, 2014). The key to this debate is that change in behaviour does not necessarily involve a change in attitudes or knowledge. Historical methods of sustainability have tended to be based on persuasion, education, or regulation, on the assumption that informed consumers could make rational and green decisions. Despite that, however, it can also be seen in the behavioural economics that consumer behaviour is not in any way rational in the sense that some people would propose, but is instead induced by the absence of heuristics, bias and situational-cues (Thaler and Sunstein, 2008). Green nudging exploits these behavioural routines by redesigning choice contexts with subtle manipulations of the salience, ease, or social acceptability of sustainable choices. The pillars of behavioural alchemy are represented in the paradigm by three underlying mechanisms: default settings, framing effects and social norms. What the default of the usefulness will be, therefore is that it must utilise consumer inertia as a means of pre-deciding a green option which will minimize cognitive load and maximise the chance of avoiding status quo trap (Pichert and Katsikopoulos, 2008). The exerted effects of framing dominate down to the feeling of the packaging options as profitability or losses; and also, is perfectly compatible with the results of the prospect theory in consideration of fact that, the losses are more than the profits (Tversky and Kahneman, 1991). Social norm cues, on their turn, attract the social conformity motive in consumers and induce them to become eco-friendly when it takes the form of the popular or socially accepted behaviour (Goldstein, Cialdini, and Griskevicius, 2008). Collectively, these processes provide environments in which sustainable decisions are not only feasible, but likely to occur. Notably, the framework also emphasizes that green nudging does not aim at controlling consumer will, but re-directing already existing intentions to action. There are already lots of consumers who report being willing to behave in a sustainable way but are unable to do so when disrupted by convenience, habit, or competing incentives. In this sense, behavioural alchemy assumes the role of the catalyst that can mediate between latent intentions and overt behaviour. This is congruent with the Theory of Planned Behaviour proposed by Ajzen (1991) though it goes a step further and considers the way external choice structures play off internal motivational generators to establish final results. Boundary conditions that can affect the effectiveness of nudges are also highlighted within the discussion. Perceived and performed nudges may rely on contextual impacts of cultural values, products and digital and physical environments (Lehner, Mont, and Heiskanen, 2016). Considering this, social norm cues may be more

effective in other situations and conditions than in the realm of energy consumption, where a decision between default and non-default can be taken with a high degree of efficiency. Moreover, ethical consideration (e.g., transparency and consumer autonomy) should also be included in the model such that nudging could be viewed in some level of legitimacy as opposed to manipulation (Bovens, 2009; Sunstein, 2014). When the green nudging is expressed as a kind of behavioural alchemy, theoretical knowledge is pushed in two directions. First, it embraces the lessons of both behavioural economics and psychology, and marketing, into a consistent conceptual framework explaining intention-action conversion. Second, it provides a background to extend empirical research to experiment, calibrate and confirm the framework to other contexts and consumer segments in future. Generally, it is concluded that behavioural alchemy has nothing to do with changing the identities of consumers, but altering the environments under which they make their decisions. Well-calculated nudges can transform latent pro-environmental intentions into sustainable consumption behaviour, which is a fantastic and, at the same time, quite a clandestine way of solving the issue of sustainable consumption in the world.

6. RESEARCH DISCUSSION – 2

The second purpose of the research focuses on the synthesis of the known theories in order to understand better mechanisms and boundary conditions that are used to calculate green nudging effectiveness. The Theory of Planned Behaviour (TPB) (Ajzen, 1991) describes the influence of attitudes, subjective norms and perceived behavioural control on intentions, although it does not fully explain the reasons behind the failure of intentions to lead to sustainable behaviour. In this case, behavioural economics can be of benefit as extensions. As Prospect Theory (Tversky and Kahneman, 1991) notes, loss aversion disproportionately affects people, thus explaining the power of loss-based nudges (i. e. discussing the cost of unsustainable behaviour). Meanwhile, studies of choice architecture (Thaler and Sunstein, 2008; Johnson et al., 2012) show that the context of making decisions has a huge impact on behaviour. The best-known mechanisms that alleviate friction during environmentally conscious decisions include defaults, framing, and social norm cues (Pichert and Katsikopoulos, 2008; Goldstein, Cialdini, and Griskevicius, 2008). However, they are used effectively within boundary conditions that include cultural environment, nature of products, digital environment and physical environment, and the degree of environmental concern on the part of consumers (Lehner, Mont, and Heiskanen, 2016). When these theoretical influences are combined, the proposed study hypothesizes that green nudging is best effective when it is both consistent with the existing pro-environmental intentions of the consumer and also reduced the barriers of behaviour at the same time. In addition to expansion of theoretical knowledge, this synthesis provides practical recommendations on how to develop context-based nudges. Lastly, it is important to note that this integration also presupposes the ability of green nudging to be contingent thus necessitating specific attention to context, ethical aspects, and sustainability impacts in the long term.

7. FUTURE SCOPE OF THE STUDY

- Empirical Validation of the Framework – Future research can test the proposed conceptual framework through experiments, surveys, and cross-cultural studies to assess the effectiveness of different nudging mechanisms in transforming pro-environmental intentions into actual sustainable behaviours.
- Exploration of Digital and Emerging Contexts – With the rise of e-commerce, AI-driven platforms, and smart technologies, future studies can examine how digital choice architectures and personalised nudges influence sustainable consumption across diverse consumer segments.

8. LIMITATIONS OF THE STUDY

This is the primary weak point of this paper, since no empirical validation will take place in this paper, it will be quite speculative. Green nudging as behaviour alchemy is theoretically synthesized rather than directly tested, so it is not available at this point as an intervention to a very broad spectrum of consumer contexts. The use of secondary literature is another weakness as even though the collection is exhaustive it might be biased due to the research done prior and also due to the cultural backgrounds that nudging has been studied in most of the time. Nor has the framework taken into account every element of long-term behavioural persistence, or ethical concerns about autonomy or unintended effects of nudging interventions. These limitations highlight the need to conduct more empirical and cross-cultural research studies in future in order to refine, test and expand the theoretical propositions advanced in the paper.

9. CONCLUSION

Broadly speaking, this paper can be discussed as a lesson that sustainable change in the society does not necessarily imply radical change in terms of values being altered or rules being followed; rather, small changes to the methods of decision-making can slowly lead people and the society towards green behaviours and sustainability can become a reality and community-based project. This paper theorises and frames green nudging as a behavioural alchemy and suggests that it could convert pro-environmental intentions into viable sustainable behaviours. The framework incorporates the findings of behavioural economics, psychology and consumer behaviour theory to show how even small interventions, such as defaults, framing and signalling of social norms can reorganize decision situations, without changing the motivation behind them. Green nudging in this way offers an effective (but not obtrusive) means of filling the decades-old intention behaviour gap on sustainable consumption. The theoretical dimension involves the fact that this study has categorized nudges as intercessors that may convert latent consumer intentions into pro-environmental conduct that is rational in the sense that it provides indications to the marketing and policymaking society on how sustainability can be internalized within the framework of a daily decision-making process. At the same time, it also refers to contextual, cultural, ethical differences, which must be addressed in the framework of the efficiency of nudges, along with references to the value of transparency and respect to the freedom of consumers. The proposed framework is knowledge progressive but conceptual which limits generalisation in the short-term. The model would need to be re-read and re-printed in the future and tested empirically in order to prove, scale and be used within a wider cultural, digital context. But the idea of nudging as a behavioural alchemy that the book introduces provides new insights into how surprisingly small changes in context can lead to transformational behaviour that in the long-term will led to a more sustainable future of consumers, business and society.

10. CONFLICTS OF INTEREST

There were no Conflicts of Interest among authors

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