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Examination Paper by student **Melike Arikan Peggion**

Nudges vs. Information Campaigns: Pathways to Sustainable Behaviour and Habit Formation

Abstract

This essay compares the effectiveness of information campaigns and nudges in promoting sustainable behaviour, using the Attitude–Behaviour–Context (ABC) model as a framework. Evidence from reviews and meta-analyses shows that while information increases awareness, nudges—such as defaults, feedback, and social norms—produce stronger behavioural change by acting on contextual cues. The discussion highlights the role of habit formation, suggesting nudges may succeed by embedding sustainable practices into everyday routines. Integrating nudges with informational strategies offers the most promising path for long-term change.

Keywords: nudges, information campaigns, sustainable behaviour, environmental psychology, habits

1. Introduction

Addressing climate change requires not only technological innovation but also changes in everyday behaviour. Individual decisions about energy, transport, and consumption are central to sustainability (Osbaldiston & Schott, 2012). Yet pro-environmental attitudes often fail to translate into consistent action—a challenge widely noted in environmental psychology (Bamberg & Möser, 2007).

Traditional strategies rely on **information campaigns** to raise awareness. While such approaches can improve knowledge, they often have limited and short-lived effects on behaviour (Abrahamse et al., 2005). They assume rational decision-making, but contextual and habitual influences frequently override intentions (Steg & Vlek, 2009).

An alternative is the **Nudge Approach** (Thaler & Sunstein, 2008), which subtly modifies the choice environment to guide behaviour without restricting options. Nudges such as green

energy defaults (Pichert & Katsikopoulos, 2008), energy use feedback (Allcott, 2011), and social norm messages (Goldstein et al., 2008) have shown promising results. Reviews suggest nudges often outperform information campaigns because they act on contextual cues rather than solely on attitudes (Byerly et al., 2018; Carlsson et al., 2021).

This essay investigates whether nudges are more effective than information campaigns in fostering sustainable behaviour, using the **Attitude–Behaviour–Context (ABC) model** as a guiding framework. The hypothesis is that nudges produce stronger and more durable effects by aligning with contextual and habitual processes. In the discussion, the role of **habit formation** will be considered, suggesting that nudges may help embed sustainable routines into daily life, offering a pathway to long-term change.

2. Theoretical Framework

2.1 Environmental Psychology and Behavioural Change

Environmental psychology explains how beliefs, attitudes, and contextual factors shape sustainable behaviour. The **Attitude–Behaviour–Context (ABC) model** (Guagnano et al., 1995) as illustrated in Figure 1, holds that attitudes predict behaviour only when situational barriers are weak. For example, strong recycling attitudes do not lead to action if bins are unavailable.

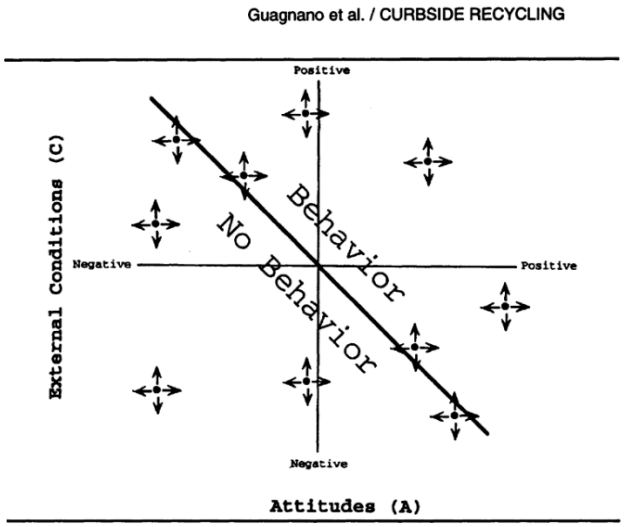

Figure 1: A-B-C Model

The Theory of Planned Behaviour (TPB) (Ajzen, 1991) similarly emphasises attitudes, norms, and perceived control as predictors of intentions, which sometimes—but not always—translate into behaviour. Meta-analyses show that contextual and habitual influences often outweigh intentions, pointing to the persistence of the **attitude–behaviour gap** (Bamberg & Möser, 2007).

2.2 Information-Based Interventions

Traditional environmental programmes often rely on informational strategies—leaflets, awareness campaigns, and education—to promote change. These increase knowledge but rarely sustain long-term behaviour.

2.3 The Nudge Approach

In contrast, nudges adjust contextual cues to make sustainable choices easier without removing alternatives. Thaler and Sunstein (2008) conceptualised the **Nudge Approach** as an applied behavioural framework that uses insights from psychology and behavioural economics to improve decision-making. Its relevance to sustainability lies in targeting the automatic, habitual side of behaviour rather than assuming rational deliberation.

Common nudges include **defaults** (e.g., automatic green energy enrolment), **feedback** (e.g., energy consumption reports), and **social norms** (e.g., towel reuse in hotels). Rather than changing attitudes directly, these interventions alter the decision environment. The Nudge Approach provides a useful model that aligns with the ABC framework: information supports attitudes, but nudges address context, the factor most directly shaping behaviour.

3. Methodological Approach

This essay employs a **review-based methodology**, drawing on meta-analyses, systematic reviews, and large-scale intervention studies. Since the research question concerns the comparative effectiveness of nudges versus information campaigns, synthesising secondary evidence is the most reliable approach.

The choice is justified by three factors. First, multiple meta-analyses already evaluate behavioural interventions in environmental contexts, providing robust cross-study insights. Second, the applied aim of the essay calls for identifying generalisable patterns rather than

testing one isolated intervention. Third, combining findings across diverse settings strengthens external validity.

The **ABC model** structures the analysis, distinguishing interventions that target **attitudes** (information) from those that modify **context** (nudges). This enables systematic comparison of their effectiveness.

While selective rather than exhaustive, the review prioritises studies that (1) provide meta-analytical or systematic syntheses, (2) directly compare nudges with information, or (3) assess long-term behavioural outcomes. This approach does not generate new empirical data but allows for a critical evaluation of existing evidence and the development of a testable hypothesis.

4.Data and Results / Literature Review

4.1 Effectiveness of Information-Based Interventions

Information campaigns have been a cornerstone of environmental policy since the 1970s. Their logic is straightforward: increasing knowledge and awareness will shift attitudes, which in turn will drive behaviour change (Abrahamse & Matthies, 2018). However, empirical evidence shows that this assumption often fails to hold.

A review by Abrahamse et al. (2005) analysed household energy conservation interventions and found that informational strategies—such as leaflets, posters, and brochures—were effective in improving knowledge but only weakly influenced actual energy-saving behaviours. The authors concluded that information works best when combined with other measures, such as goal setting or feedback. Similarly, Steg and Vlek (2009) reviewed environmental behaviour change programmes and noted that while informational approaches can raise awareness, they rarely translate into long-term behavioural shifts without structural support.

Meta-analyses confirm these findings. Bamberg and Möser (2007), in their meta-analysis of psycho-social determinants of pro-environmental behaviour, reported that knowledge and environmental concern are relatively weak predictors of behaviour compared to contextual factors such as perceived behavioural control and situational constraints. This aligns with the attitude–behaviour gap observed in many sustainability domains: people often express concern

but fail to act consistently due to habits, convenience, or contextual barriers (Kollmuss & Agyeman, 2002).

Overall, while information-based interventions are important for raising baseline awareness, their behavioural impact is typically small to moderate and short-lived.

4.2 Effectiveness of Nudges

By contrast**, nudges**—small modifications in choice architecture—have shown stronger and more consistent impacts on pro-environmental behaviour. These interventions do not rely on changing attitudes directly but instead adjust contextual cues, making sustainable choices easier or more attractive (Thaler & Sunstein, 2008).

A large-scale review by Byerly et al. (2018) synthesised evidence from dozens of field experiments and found that nudges significantly increased sustainable behaviours such as recycling, sustainable food consumption, and energy conservation. The review highlighted that defaults (e.g., automatically enrolling households in green electricity tariffs) and social norm feedback (e.g., comparing household energy use to neighbours) were among the most effective strategies.

Carlsson et al. (2021) further emphasised the policy relevance of nudges, concluding that they are cost-effective, scalable, and capable of producing measurable reductions in environmental impact. For example, Pichert and Katsikopoulos (2008) demonstrated that default enrolment in green energy programmes dramatically increased adoption rates, with participation levels often exceeding 90%, compared to less than 30% under opt-in conditions. Similarly, Allcott (2011) analysed large-scale U.S. data from home energy reports and found that providing households with social comparison feedback reduced energy consumption by 2–3% on average—a modest but significant effect given the population scale. Goldstein et al. (2008) showed that hotel guests reused towels more when told most others did, highlighting the power of social norms in shaping conservation behaviour.

A meta-analysis by Osbaldiston and Schott (2012) compared 253 pro-environmental behaviour experiments and concluded that contextual interventions, including nudges, consistently outperformed informational strategies in producing behavioural change. Their synthesis showed that interventions targeting situational and behavioural cues explained significantly more variance in sustainable behaviours than those focusing only on attitudes or knowledge.

4.3 Comparative Insights: Nudges vs. Information

The comparative evidence strongly suggests that nudges outperform information-based interventions in promoting pro-environmental behaviour. While information campaigns raise awareness, their effect on actual behaviour is limited unless paired with other strategies. Nudges, on the other hand, directly alter the decision environment, reducing reliance on conscious deliberation and bridging the attitude–behaviour gap (Byerly et al., 2018; Osbaldiston & Schott, 2012).

Moreover, the effectiveness of nudges tends to persist over time, particularly when they are embedded in everyday decision-making contexts. For instance, once a household is enrolled in a green energy default, the behaviour continues without requiring further motivation (Pichert & Katsikopoulos, 2008). By contrast, informational campaigns often suffer from "decay effects," with behaviour reverting once the campaign ends (Steg & Vlek, 2009).

Nevertheless, nudges are not without limitations. Schubert (2017) highlighted ethical concerns, arguing that nudges may undermine autonomy by exploiting cognitive biases. Furthermore, their effectiveness can vary by cultural and situational context. For example, social norm nudges are more effective in collectivist cultures, where conformity plays a stronger role, than in highly individualistic societies (Carlsson et al., 2021).

Another limitation is that many nudging studies measure short-term effects, while long-term sustainability of behaviour remains less clear. Lades and Delaney (2022) argue that nudges are most effective when combined with reflective strategies that encourage self-awareness and identity-based motivation. This perspective suggests that nudges may act as initial triggers, but maintaining long-term pro-environmental behaviour requires integration into **habit formation processes**—an issue addressed later in the discussion section.

5. Discussion

The findings support the hypothesis that nudges outperform information campaigns in promoting sustainable behaviour. Within the ABC model, this occurs because information targets attitudes—weak predictors when situational barriers are strong (Guagnano et al., 1995)—whereas nudges alter the context, making sustainable choices the easier option.

Nudges are particularly effective because many environmental behaviours are habitual. Everyday actions such as switching off lights or recycling are often automatic rather than deliberative (Verplanken & Wood, 2006). By reshaping contextual cues, nudges help initiate new routines. For example, placing recycling bins in convenient spots boosts recycling rates not because attitudes change, but because the behaviour becomes effortless (Osbaldiston & Schott, 2012).

This connects to the **habit discontinuity hypothesis** (Verplanken & Roy, 2016): contextual shifts, such as moving house, create opportunities for new habits. Nudges can anchor sustainable practices in these moments, enhancing persistence beyond initial exposure. This explains why defaults and feedback often sustain impact longer than information campaigns (Table 1).

Intervention Type	Relation to Habits	Long-Term Impact	Key Sources
Information Campaigns	Limited effect on habits – focus on conscious attitudes and intentions	Behaviour often decays after campaign ends; weak habit persistence	Abrahamse et al. (2005); Bamberg & Möser (2007)
Nudges – Defaults / Contextual Cues	Strongly support **automatic routines** by embedding sustainable behaviour in daily contexts	High persistence (e.g., staying with default green energy plan); can lock in habits	Pichert & Katsikopoulos (2008); Osbaldiston & Schott (2012)
Nudges – Feedback & Norms	Reinforce behaviour through **repeated cues** and social reinforcement	Can gradually build new routines (e.g., energy-saving, recycling) if consistently applied	Allcott (2011); Goldstein et al. (2008)
Habit Formation Opportunity	Nudges create **"windows"** for habit change, especially during contextual disruptions (habit discontinuity)	Habits may persist even after initial nudge is removed	Verplanken & Roy (2016)

Table 1: Role of Nudges vs. Information in Habit Formation

While contrasted here, nudges and information can complement each other. Awareness campaigns may prepare individuals, while nudges supply the contextual push needed to act. For example, public messaging about energy conservation is more effective when paired with default enrolment in green energy programmes (Pichert & Katsikopoulos, 2008) or feedback on household use (Allcott, 2011).

From a policy perspective, nudges offer low-cost, scalable interventions but should not replace regulation or education. Ethical concerns about autonomy remain (Schubert, 2017), but transparency and choice-preservation can mitigate these risks.

In sum, nudges are more effective than information alone because they engage automatic and contextual processes, while also facilitating the formation of sustainable habits. Their integration with informational and structural strategies offers the strongest pathway toward lasting pro-environmental behaviour.

6. Conclusion

This essay examined the effectiveness of information campaigns and nudges in promoting sustainable behaviour, using the Attitude–Behaviour–Context (ABC) model as a framework. The review of empirical studies and meta-analyses show that while information raises awareness, its behavioural impact is modest and temporary, as it focuses mainly on attitudes and neglects contextual and habitual barriers.

In contrast, nudges—such as defaults, feedback, and social norms—demonstrate stronger, more enduring effects by altering choice architecture and leveraging automatic processes. Their success often lies in supporting the formation of new habits that embed sustainable practices into daily life (Figure 2).

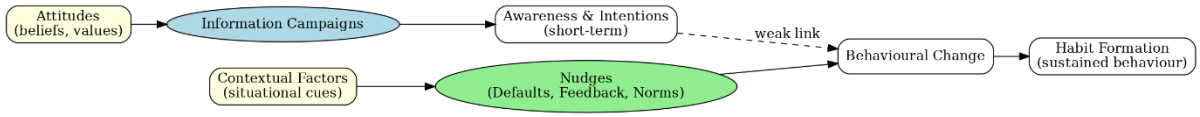

Figure 2: Summary of the central argument of this essay, contrasting the weak link between information and behaviour with the stronger pathway from nudges to habit formation.

The findings suggest that the most effective path combines strategies: information to build awareness, nudges to shape the decision environment, and habit-focused interventions for long-term change. Policymakers should thus view nudges not as replacements but as complements within a broader behavioural policy mix.

REFERENCES

Abrahamse, W., Steg, L., Vlek, C., & Rothengatter, T. (2005). A review of intervention studies aimed at household energy conservation. *Journal of Environmental Psychology, 25*(3), 273–291. https://doi.org/10.1016/j.jenvp.2005.08.002

Abrahamse, W., & Matthies, E. (2018). Informational strategies to promote pro-environmental behaviour: Changing knowledge, awareness, and attitudes. In L. Steg & J. I. M. de Groot (Eds.), *Environmental psychology: An introduction* (2nd ed., pp. 261–272). Wiley-Blackwell. https://doi.org/10.1002/9781119241072.ch26

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-T

Allcott, H. (2011). Social norms and energy conservation. *Journal of Public Economics, 95*(9–10), 1082–1095. https://doi.org/10.1016/j.jpubeco.2011.03.003

Bamberg, S., & Möser, G. (2007). Twenty years after Hines, Hungerford, and Tomera: A new meta-analysis of psycho-social determinants of pro-environmental behaviour. *Journal of Environmental Psychology, 27*(1), 14–25. https://doi.org/10.1016/j.jenvp.2006.12.002

Byerly, H., Balmford, A., Ferraro, P. J., Hammond Wagner, C., Palchak, E., Polasky, S., Ricketts, T. H., Schwartz, A. J., & Fisher, B. (2018). Nudging pro-environmental behavior: Evidence and opportunities. Frontiers in Ecology and the Environment, 16(3), 159–168. https://doi.org/10.1002/fee.1777

Carlsson, F., Gravert, C., Johansson-Stenman, O., & Kurz, V. (2021). The use of green nudges as an environmental policy instrument. *Review of Environmental Economics and Policy, 15*(2), 216–237. https://doi.org/10.1086/715524

Goldstein, N. J., Cialdini, R. B., & Griskevicius, V. (2008). A room with a viewpoint: Using social norms to motivate environmental conservation in hotels. *Journal of Consumer Research, 35*(3), 472–482. https://doi.org/10.1086/586910

Guagnano, G. A., Stern, P. C., & Dietz, T. (1995). Influences on attitude–behavior relationships: A natural experiment with curbside recycling. *Environment and Behavior, 27*(5), 699–718. https://doi.org/10.1177/0013916595275005

Kollmuss, A., & Agyeman, J. (2002). Mind the gap: Why do people act environmentally and what are the barriers to pro-environmental behaviour? *Environmental Education Research, 8*(3), 239–260. https://doi.org/10.1080/13504620220145401

Lades, L. K., & Delaney, L. (2022). Nudge FORGOOD. *Behavioural Public Policy, 6*(1), 75–94. https://doi.org/10.1017/bpp.2019.53

Osbaldiston, R., & Schott, J. P. (2012). Environmental sustainability and behavioral science: Meta-analysis of pro-environmental behavior experiments. *Environment and Behavior, 44*(2), 257–299. https://doi.org/10.1177/0013916511402673

Pichert, D., & Katsikopoulos, K. V. (2008). Green defaults: Information presentation and pro-environmental behaviour. *Journal of Environmental Psychology, 28*(1), 63–73. https://doi.org/10.1016/j.jenvp.2007.09.004

Schubert, C. (2017). Green nudges: Do they work? Are they ethical? *Ecological Economics, 132*, 329–342. https://doi.org/10.1016/j.ecolecon.2016.11.009

Steg, L., & Vlek, C. (2009). Encouraging pro-environmental behaviour: An integrative review and research agenda. *Journal of Environmental Psychology, 29*(3), 309–317. https://doi.org/10.1016/j.jenvp.2008.10.004

Thaler, R. H., & Sunstein, C. R. (2008). *Nudge: Improving decisions about health, wealth, and happiness.* Yale University Press.

Verplanken, B., & Roy, D. (2016). Empowering interventions to promote sustainable lifestyles: Testing the habit discontinuity hypothesis in a field experiment. *Journal of Environmental Psychology, 45,* 127–134. https://doi.org/10.1016/j.jenvp.2015.11.008

Verplanken, B., & Wood, W. (2006). Interventions to break and create consumer habits. *Journal of Public Policy & Marketing, 25*(1), 90–103. https://doi.org/10.1509/jppm.25.1.90