Literature Review

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1 Introduction

We know that developed countries have historically contributed the most to climate change, and addressing this issue requires significant behavioural change at both individual and systemic levels. Digital interventions, like mobile apps, social media campaigns, and gamification, are increasingly seen as tools to drive such change. This review explores how digital tools can influence sustainable behaviours in developed countries by examining three key behavioural theories: the Theory of Planned Behaviour (TPB), Nudge Theory, and Social Practice Theory (SPT). By understanding these frameworks, we can better design interventions that address the unique challenges of reducing the environmental impact of developed nations.

2 Theory of Planned Behavior

By this theory, it is assumed that behaviour is driven by intentions, which are shaped by three main factors: attitudes, subjective norms, and perceived behavioural control. Digital interventions can target these factors to encourage sustainable behaviours. For example, apps that calculate carbon footprints can help change attitudes by showing users the direct impact of their actions on the environment (Whitmarsh et al., 2011). Social media campaigns, like #FridaysForFuture, can influence subjective norms by making sustainable actions seem more socially acceptable and widespread (Pearce et al., 2019). Additionally, apps that provide real-time feedback on energy usage can boost perceived behavioural control by making it easier for users to see how small changes can make a difference (Abrahamse et al., 2007).

However, we know that TPB has its limitations; it assumes people make rational decisions; but in reality emotions and habits often play a bigger role in behaviour. For instance, someone might know that driving less is better for the environment but still choose to drive because it's a habit or feels more convenient (Gifford, 2011).

3 Nudge Theory

Digital interventions can act as "nudges" by making sustainable choices easier or more appealing; for example, apps can set renewable energy plans as the default option, making it simpler for users to choose green energy (Sunstein & Reisch, 2013). Gamification, like earning points for reducing energy use, can also nudge people toward more sustainable behaviours (Thaler & Sunstein, 2008). Something as simple as a smart meter showing real-time energy usage can nudge households to cut back on consumption (Darby, 2006).

We know though, that nudges aren't perfect; critics argue that they might not lead to long-term change because they don't always address the underlying reasons for unsustainable behaviour (Bovens, 2009). There's also the ethical concern that nudges can feel manipulative if users aren't aware of how their choices are being influenced. Still, Nudge Theory offers a practical way to design low-cost, scalable interventions that can drive small but meaningful changes.

4 Social Practice Theory

It is assumed that behaviour isn't just about individual choices, but is deeply tied to social practices—everyday routines that are shaped by materials, competences, and meanings. Digital interventions can influence these practices by altering the elements that sustain them; for example, apps that connect users to carpooling services or recycling centres can change the materials involved in daily life (Shove et al., 2012). Online tutorials or educational platforms can build competences by teaching people how to live more sustainably (Hargreaves et al., 2013). Social media campaigns can shift meanings by reframing sustainability as a social norm or a moral responsibility (Geels, 2012).

We know that SPT has its challenges. Because it focuses on systemic and cultural factors, it can be harder to design specific interventions compared to theories like TPB or Nudge Theory. It also tends to downplay the role of individual agency, which can be important for driving change. However, SPT provides a valuable perspective for understanding how digital tools can reshape the broader social and cultural practices that contribute to climate change.

5 Analysis

Each of these theories offers a different lens for understanding how digital interventions can drive behavioural change. TPB focuses on individual decision-making, making it useful for designing tools that target attitudes and norms. Nudge Theory emphasizes small, subtle changes in choice architecture, which can be effective for encouraging immediate, low-effort actions. SPT, on the other hand, looks at the bigger picture, showing how digital tools can reshape the social and cultural practices that underpin unsustainable behaviours.

We know that no single theory has all the answers. TPB and Nudge Theory are great for addressing individual behaviours but may overlook systemic issues.

SPT helps us understand the broader context but can be harder to apply in practice.

6 Bibliography

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