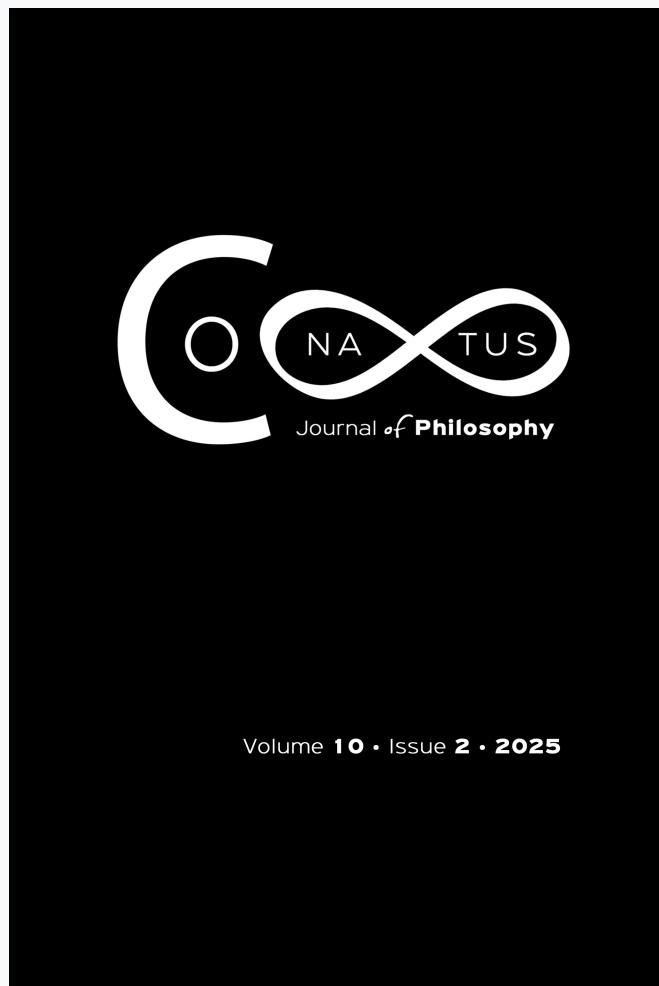


Conatus - Journal of Philosophy

Vol 10, No 2 (2025)

Conatus - Journal of Philosophy



In Defence of Nudging from a Virtue Ethics Perspective

Ritesh Bansal, Joby Varghese

doi: [10.12681/cjp.42776](https://doi.org/10.12681/cjp.42776)

Copyright © 2025, Ritesh Bansal, Joby Varghese



This work is licensed under a [Creative Commons Attribution-NonCommercial 4.0](https://creativecommons.org/licenses/by-nc/4.0/).

To cite this article:

Bansal, R., & Varghese, J. (2025). In Defence of Nudging from a Virtue Ethics Perspective. *Conatus - Journal of Philosophy*, 10(2), 35–71. <https://doi.org/10.12681/cjp.42776>

In Defence of Nudging from a Virtue Ethics Perspective

Ritesh Bansal

Indian Institute of Technology Jammu, India
E-mail address: ritesh.bansal@iitjammu.ac.in
ORCID iD: <https://orcid.org/0009-0003-2004-0448>

Joby Varghese

Indian Institute of Technology Jammu, India
E-mail address: joby.varghese@iitjammu.ac.in
ORCID iD: <https://orcid.org/0000-0002-3108-3406>

Abstract

Nudging is typically understood as a design intended to influence the behaviour or choices of decision-makers to promote their own or other stakeholders' welfare by steering choices in beneficial directions without restricting their freedom of choice. This paper explores the ethical dimensions of nudging and provides an account that defends the framework of nudging from a virtue ethics perspective. We will do so by examining the design and purposes of nudging and its relationship with welfare, virtue and eudaimonia. We argue that the notion of welfare in nudging is closely associated with the notion of external goods in the Nicomachean Ethics and that certain nudges can be helpful in cultivating virtues. We refer to nudges such as virtue-conducive nudges that aim to enhance welfare and also support the cultivation of virtues over time. We identify two key pathways to explore the interplay between nudging, virtue, welfare and eudaimonia. In the first pathway, we discuss those nudges which aim at promoting welfare and also contribute to the development of virtues over time. The second pathway explores those nudges that enhance welfare as a consequence of virtue development. In the Nicomachean Ethics, both welfare and virtues are essential for attaining eudaimonia. By exploring the relationships between nudging, welfare and virtue, this paper provides an account that defends the design and practice of nudging from a virtue ethics perspective.

Keywords: nudging; welfare; virtue ethics; habit formation; virtue cultivation; eudaimonia

I. Introduction

In everyday life, individuals often rely on their intuitions and emotions to quickly resolve various decision-making situations. While making the choices can have a tremendous impact on people's welfare, behavioural economics reveals valuable insights about human decision-making, which suggests that individuals often deviate from rational models of decision-making for various reasons. People are prone to various cognitive biases, such as confirmation bias,¹ status quo bias,² and anchoring effect,³ etc., while making choices. These biases often influence decision makers to make irrational choices, which may ultimately affect their overall welfare.

In different decision-making situations, people are often bombarded with a myriad of options, where some options are much better than others, and the choice of the best option is very likely to contribute to their overall welfare. For example, we all know that eating fruits is good for our health, and we also teach the same thing to our children. However, due to various cognitive biases, when we have fruits, cakes, and other delicious items in front of us, picking the best available option by invoking rationality alone becomes a highly challenging task for us in real-world situations. In other words, although a better option, which contributes to the welfare of decision-makers in terms of being healthy, is available, they might not choose it over the other available options due to various contingent and psychological reasons. Hence, there is a need for a gentle push that may influence people to opt for the best available choice. In this context, Thaler and Sunstein propose a method to help decision-makers choose the option that may make choosers or other stakeholders better off because of the choices they make.⁴ This method is termed 'nudge.' The primary goal of nudge is to influence people's behaviour or choices in a predictable manner by designing a choice architecture in a decision-making context by carefully considering human behavioural insights, including various biases.

¹ Margit E. Oswald and Stefan Grosjean, "Confirmation Bias," in *Cognitive Illusions: A Handbook of Fallacies and Biases in Thinking, Judgement and Memory* (Psychology Press, 2004), 79-83.

² William Samuelson and Richard Zeckhauser, "Status Quo Bias in Decision Making," *Journal of Risk and Uncertainty* 1 (1988): 7-59.

³ Amos Tversky and Daniel Kahneman, "Judgment under Uncertainty: Heuristics and Biases: Biases in Judgments Reveal Some Heuristics of Thinking under Uncertainty," *Science* 185, no 4157 (1974): 1124-1131.

⁴ Richard H. Thaler and Cass R. Sunstein, *Nudge, The Final Edition* (Penguin Books, 2021).

In the background given above, Thaler and Sunstein suggest libertarian paternalism as the foundational principle for nudging.⁵ According to them, it is a “*movement*” for the welfare of the people.⁶ Libertarian paternalism emerges from paternalism, in which the welfare of the stockholders is the primary objective. Thaler states:

Readers who manage to reach the fifth page of *Nudge* find that we define our objective as trying to “influence choices in a way that will make choosers better off, as judged by themselves.”⁷

This statement suggests that nudges are designed to facilitate choices that individuals would wish to make but often fail to make in reality because of certain biases or behavioural tendencies. Based on the fundamental principle of libertarian paternalism, nudging advocates the promotion of the welfare of the stakeholders, where choice architects should design nudges in such a way that preserves the individuals’ freedom of choice.

While nudging, if a libertarian paternalistic choice architect acts out of their practical reasoning with the intention to promote the welfare of stakeholders, it can be seen as a virtuous act out of benevolence, compassion, and justice. While practising their virtues, choice architects should also ensure that nudging practices promote the cultivation of virtues among decision-makers as well. It is also important to note that the motivation for nudging interventions is not limited to the welfare of the individuals who take part in a nudged design. Nudging interventions also encompass concerns about the actions of individuals that may affect third parties and broader societal interests. Thus, stakeholders in nudging include both nudgees, who directly engage with the choice architecture, and third parties who may enjoy welfare from the nudging outcomes. This broader perspective supports the nudging interventions that promote prosocial behaviour, the provision of public goods and similar goals for collective welfare. Accordingly, when we refer to ‘welfare’ or ‘welfare of stakeholders’ in this paper, these terms encompass both individual and broader societal welfare.

In contemporary times, nudging has emerged as a popular behavioural public policy tool to steer individuals’ choices. At the same

⁵ Ibid.

⁶ Ibid., 6.

⁷ Richard H. Thaler, *Misbehaving: The Making of Behavioural Economics* (Penguin Books, 2015), 325.

time, it has also been criticized for potential ethical concerns. A literature review on ethical issues of nudging by Kuyer and Gordijn⁸ groups these issues into four major areas: (1) autonomy, (2) welfare, (3) long-term adverse effects, and (4) democracy and deliberation. Michaelsen et al.⁹ emphasize two main lines of ethical concerns regarding nudging: (1) the first group considers nudging as manipulative because it undermines rational decision-making and freedom of choice, and (2) the second group considers nudging as paternalistic because choice architects may impose their preferences on individuals and override individuals' real preferences. The core claim of both critiques is that nudging fails to respect and preserve individuals' autonomy. Bovens¹⁰ and Grüne-Yanoff¹¹ contend that '*nudges violate autonomy*' because of the reason that nudges are opaque rather than transparent and therefore '*work best in the dark*.' Similarly, Hacker argues that there is a possibility that decision-makers' autonomy may be undermined while nudges are implemented by leveraging biases even if nudging is for the decision-maker's own welfare, because nudges may change individuals' '*first- and/or second-order preferences*'.¹² Hausman and Welch argue,

No matter how well intentioned government efforts to shape choices may be, one should be concerned about the risk that exploiting decision-making foibles will ultimately diminish people's autonomous decision-making capacities.¹³

That is to say, critics contend that nudging diminishes agency because choice architects try to impose their view of best interests on decision-makers. Thus, the problem of autonomy refers to concerns relat-

⁸ Paul Kuyer and Bert Gordijn, "Nudge in Perspective: A Systematic Literature Review on the Ethical Issues with Nudging," *Rationality and Society* 35, no. 2 (2023): 191-230.

⁹ Patrik Michaelsen, Lars-Olof Johansson, and Martin Hedesström, "Experiencing Default Nudges: Autonomy, Manipulation, and Choice-satisfaction as Judged by People Themselves," *Behavioural Public Policy* 8, no. 1, (2024): 85-106.

¹⁰ Luc Bovens, "The Ethics of Nudge," in *Preference Change: Approaches from Philosophy, Economics and Psychology*, eds. Till Grüne-Yanoff and Sven Ove Hansson, 207-219 (Springer, 2009).

¹¹ Till Grüne-Yanoff, "Old Wine in New Casks: Libertarian Paternalism still Violates Liberal Principles," *Social Choice and Welfare* 38 (2012): 635-645.

¹² Philipp Hacker, "Nudging and Autonomy: A Philosophical and Legal Appraisal," in *Research Methods in Consumer Law*, eds. Hans-W. Micklitz, Anne-Lise Sibony, and Fabrizio Esposito, 77-118 (Edward Elgar Publishing, 2018).

¹³ Daniel M. Hausman and Brynn Welch, "Debate: To Nudge or Not to Nudge," *Journal of Political Philosophy* 18, no. 1 (2010): 135.

ed to nudging interventions that may undermine individuals' ability to make informed, rational, and autonomous decisions according to their own preferences, goals, and values. In response to these critics, Engelen and Nys emphasize that "*we should not put the bar too high*" while analyzing normative standards of autonomy, otherwise our decisions, such as choosing a life partner, a job, or a hobby, might no longer qualify as autonomous choices worthy of respect.¹⁴ We contend that when nudges are transparent and allow individuals to recognize and endorse the values guiding their choices, they reinforce, rather than alienate, agents from their authentic identity.

Based on these critiques, a fundamental ethical question is 'In what ways can nudging be justified by choice architects when they influence individuals' behaviour or choices?' In the literature, there are ethical discussions which focus on the problem of autonomy and manipulation, but a less explored but equally important perspective is the potential of nudging to impact the moral development of nudgees or the stakeholders of nudges.

The questions we aim to explore in this paper are: do nudging interventions – such as default settings used to encourage retirement savings or strategic placement of donation boxes at checkout counters to promote charitable donations – merely aim at promoting welfare? Or do they also assist individuals to cultivate virtues such as prudence and generosity? And finally, how can nudges contribute to the flourishing of human life?

These questions lead us to explore nudging through the lens of virtue ethics. The emphasis in virtue ethics is on the development of moral character and on the long-term flourishing of individuals, which helps us to understand the effects of nudging on character development when individuals are being nudged by choice architects. The central claim of this paper is that nudging not only influences the behaviour or choices of the nudgees and promotes the welfare of stakeholders but also contributes to the cultivation of moral character and the flourishing of the lives of those stakeholders.

To assess the effects of nudging on character development, we will explore whether nudging interventions facilitate virtuous habits or remove barriers to virtuous actions. We will also explore the relationship between nudging, welfare, and virtues to evaluate the potential for long-term flourishing of the stakeholders through virtue-conducive

¹⁴ Bart Engelen and Thomas R. V. Nys, "Nudging and Autonomy: Analyzing and Alleviating the Worries," *Review of Philosophy and Psychology* 11 (2020): 152.

nudges.¹⁵ From the standpoint of virtue ethics, which emphasizes the cultivation of stable character traits through habituated action, this paper argues that nudging can be ethically justified not only because it aims at promoting welfare but also because it supports and reinforces the cultivation of virtuous dispositions among individuals who partake in a choice architecture. We argue that virtue-conducive nudges can incorporate reflective checkpoints – such as prompts for justification or feedback loops – that engage agents' deliberative capacities. In Aristotle's ethics, autonomy is not mere non-interference, but the capacity for reason-guided self-determination. Virtue-conducive nudges, by supporting rational reflection and habituation, educate rather than erode agency. Our strategy is to analyse the examples of nudges and the effects of these nudges on individuals' character building. The following section will analyse virtue ethics and its central tenets. Section III will discuss the relationship between virtues, welfare and nudging. Section IV will conclude the paper.

II. Virtue ethics as an ethical framework

To analyse whether nudging is morally justified, it is important to place the discussion within a normative ethical framework. Traditionally, ethical evaluations of actions revolve mainly around two major ethical frameworks: consequentialism and deontology. In consequentialism, the actions are mainly evaluated based on their outcomes. If an action increases overall utility or welfare, it is considered a morally right act in consequentialism. However, this outcome-oriented view overlooks crucial ethical concerns related to the autonomy and intentions of individuals while performing the action. On the other hand, deontology, which is grounded in the work of Immanuel Kant, evaluates actions by their adherence to moral duties, regardless of their consequences. Deontology emphasizes the 'good will' behind any act to evaluate if the act is morally worthy.¹⁶

While both consequentialist and deontological approaches offer important insights into the ethics of nudging, those debates focus only on welfare and autonomy, outcomes and intentions, or utility and duty. Since consequentialism emphasizes utility and deontology focuses on motive, these frameworks do not fully capture the signif-

¹⁵ By *virtue-conducive nudges*, we mean nudging interventions that aim to promote welfare and contribute to the cultivation of virtues over time. In this paper, when we state that nudges are capable of promoting virtues, we mean only *virtue-conducive nudges*.

¹⁶ Immanuel Kant, *Groundwork of the Metaphysics of Morals*, ed. Mary Gregor (Cambridge University Press, 2006), 4:394.

ificance of the moral development of individuals or the cultivation of good character over time. This limitation leads us to adopt the virtue ethics framework, where the moral focus is ‘who we ought to be’ rather than ‘what we ought to do.’ Virtue ethics emphasizes the cultivation of moral character traits or virtues that lead individuals towards a flourishing life. The development of good character traits is considered the foundation of ethical behaviour in virtue ethics. This emphasis on virtue as central to moral life distinguishes it from consequentialism and deontology. In general, the traits of character that make certain people admirable are known as ‘virtues.’ Hursthouse and Pettigrove state, “*a virtue is an excellent trait of character.*”¹⁷ A virtuous individual is a morally admirable person who behaves and feels in the right way. Annas states, “*To qualify as a virtue, a character trait must embody a commitment to some ethical value.*”¹⁸ Some of the traditional virtues are courage, kindness, honesty, generosity, loyalty, prudence, diligence, temperance, fairness, justice, benevolence, modesty, and hospitality.¹⁹ These virtues are moral qualities that shape people’s choices and contribute to the welfare of individuals and society as a whole. The concept of virtue is closely linked to moral philosophy. In the framework of virtue ethics, virtues serve as guiding principles for ethical behaviour. Moreover, when an ethical agent focuses on attaining virtues, the agent also wants to eliminate bad character traits, which are the opposite of virtues, such as cowardice, dishonesty, stinginess, disloyalty, laziness, etc. These bad character traits are known as vices that one ought to get rid of.²⁰

In general, virtue ethics emphasizes the cultivation of virtues and the development of moral character *for a good life.*²¹ The first theoretical structure of virtue ethics can be found in the work of Aristotle.²² Aristotle emphasizes that the ultimate aim of cultivating virtue is to guide individuals towards *eudaimonia* or human flourishing. Virtues are

¹⁷ Rosalind Hursthouse and Glen Pettigrove, “Virtue Ethics,” in *Stanford Encyclopedia of Philosophy*, eds. Edward N. Zalta and Uri Nodelman, 2022, <https://plato.stanford.edu/archives/fall2023/entries/ethics-virtue/>.

¹⁸ Julia Annas, “Virtue Ethics,” in *The Oxford Handbook of Ethical Theory*, ed. David Copp, 515-536 (Oxford Academic, 2007), 519.

¹⁹ Barbara MacKinnon and Andrew Fiala, *Ethics: Theory and Contemporary Issues* (Cengage Learning, 2009), 149.

²⁰ Ibid.

²¹ Henrik Syse and Martin L. Cook, “Robotic Virtue, Military Ethics Education, and the Need for Proper Storytellers,” *Conatus – Journal of Philosophy* 8, no. 2 (2023): 667-680.

²² Annas, 515-536.

essential because they guide individuals towards meaningful actions and help them to live a flourishing life. Thus, virtues are constituents of living a good life as a whole. They reflect an individual's character and way of life, which are shaped by the choices she makes. For this reason, this paper primarily draws on the work of Aristotle, particularly the *Nicomachean Ethics*.

According to Annas, virtue is a character trait that helps individuals to act rightly, with the right motives and in the right way.²³ The key feature of the classical version of virtue ethics is the importance it places on the *agent's practical reasoning*. An individual is considered virtuous only if she acts rationally after clearly understanding the reasons for acting in a certain way. However, there are other perspectives that challenge the role of an agent's practical reasoning. For example, in Humean virtue ethics, a virtuous person is seen as someone with stable dispositions that generally lead to good actions and cooperation in social situations. It is not necessary that a virtuous person should acquire these dispositions only based on her own reflective endorsement. She may also adopt these dispositions because of the influence of others' reflective reasoning.²⁴ The more radical version suggests that individuals do not even need to engage in reflective reasoning at all. A person can still be virtuous even if they possess the disposition and are ignorant of it.²⁵ In other words, having a virtue does not always depend on an agent's practical reasoning. This understanding is different from Aristotle's view, where a virtuous person is someone who learns the right way to act based on their personal reasoning and reflection.

According to Hursthouse & Pettigrove, there are different forms of virtue ethics, but all of them, in some way, accept that virtue ethics is rooted in ancient Greek philosophy and employ the following three concepts (1) *arête* (excellence or virtue), (2) *phronesis* (practical or moral wisdom) and (3) *eudaimonia* (flourishing or happiness).²⁶ One of the reasons that people may fall short of virtue is the lack of *phronesis*, i.e., practical or moral wisdom. Practical or moral wisdom is the *knowledge or understanding* that enables an agent to consistently do the right things in different situations.

²³ Ibid.

²⁴ Maria Merrit, "Virtue Ethics and Situationist Personality Psychology," *Ethical Theory and Moral Practice* 3, no. 4 (2000): 365-383.

²⁵ Julia Driver, *Uneasy Virtue* (Cambridge University Press, 2001), 9.

²⁶ Rosalind Hursthouse and Glen Pettigrove, "Virtue Ethics," in *Stanford Encyclopedia of Philosophy*, eds Edward N. Zalta and Uri Nodelman, 2023, <https://plato.stanford.edu/archives/fall2023/entries/ethics-virtue/>.

At this point, it is important to recognize that there are varieties of approaches within virtue ethics. While all approaches emphasize virtues and consider practical wisdom essential for acquiring virtues, there are differences in how they combine these concepts and how they propose individuals should live their lives as a whole. Hursthouse and Pettigrove identify four forms of virtue ethics: a) eudaimonist virtue ethics, b) agent-based and exemplarist virtue ethics, c) target-centered virtue ethics, and d) Platonistic virtue ethics.²⁷

In eudaimonist virtue ethics, as proposed by Aristotle, the focus is on moral character and the cultivation of virtues that one ought to possess to achieve the ultimate goal of human beings, that is, eudaimonia. We will elaborate on eudaimonia in section 2.1. In agent-based virtue ethics, morally right actions are considered as the result of good motivations, and similarly, morally wrong actions stem from bad motivations.²⁸ In the exemplarist account, Zagzebski emphasizes learning virtues by imitating *exemplars of moral goodness*.²⁹ Zagzebski states, “Exemplars are those persons who are most imitable, and they are most imitable because they are most admirable.”³⁰ Thus, in exemplarist virtue ethics, an agent’s understanding of virtuous motivations is shaped by the lives and behaviours of exemplars. Target-centered virtue ethics, introduced by Christine Swanton, begins with the traits we already think are good, like being generous or courageous.³¹ It explains how these traits should guide our actions. The target-centered framework guides towards the target of virtue. For example, the target of courage is to tackle fear, and similarly, the target of generosity is to share time or things with others that may be beneficial for them. Platonistic virtue ethics has two main approaches. In the first variant, Chappell argues that true virtuous action requires moving away from selfish ambitions by regularly contemplating goodness in the world.³² Similarly, Murdoch emphasizes the traits such as objectivity and unselfishness, which help individuals connect with the reality of the world.³³ In the second variant, provided by Adams, virtue is grounded in a meta-

²⁷ Ibid.

²⁸ Michael Slote, *Morals from Motives* (Oxford University Press, 2001).

²⁹ Linda Zagzebski, “Exemplarist Virtue Theory,” *Metaphilosophy* 41, nos. 1-2 (2010): 41-57.

³⁰ Ibid., 52.

³¹ Christine Swanton, *Virtue Ethics: A Pluralistic View* (Oxford University Press, 2003).

³² Timothy Chappell, *Knowing what to Do: Imagination, Virtue, and Platonism in Ethics* (Oxford University Press, 2014), 300.

³³ Iris Murdoch, *The Sovereignty of Good* (Routledge, 1971), 82.

physical framework.³⁴ Adams suggests that virtues resemble the qualities of a supremely perfect being – God – and that goodness is defined by the extent to which actions and traits reflect this divine goodness.

To analyse nudging and its relationship with virtue, we consider Aristotle's eudaimonist framework as well-suited. Aristotle's account provides a proper framework where virtues are cultivated through practical wisdom and help individuals to guide them towards eudaimonia. Our central argument is that nudging can help to promote welfare and cultivate virtues in real-world situations. It is also important to note that some scholars argue against the notion of stable virtues. For example, Doris contends that people's actions are not always the result of stable virtues, but rather they are often shaped by situational factors.³⁵ He emphasizes that individuals may not possess enduring virtues because external circumstances often influence their behaviour and actions. We do acknowledge these situationist worries, which raise significant doubts about the stability of moral dispositions. Nevertheless, empirical studies in psychology and the behavioural sciences demonstrate that stable habits can and do develop. Carden and Wood highlight that performing repeated actions can contribute to stable habit formation. They further emphasize the role of choice architecture in this process. As they state:

Although habits can be disrupted by changes in macro environments or during life transitions, habit performance can also be altered through choice architecture or environmental reengineering interventions that change the structure of everyday decisions. Given that habit formation requires repeated responses in a stable context, altering the decision structure may sometimes promote habit formation by making it easier to perform a desired action.³⁶

In other words, while situational factors may affect our behaviour, we should not neglect the role of choice architecture. By restructuring the choice architecture to make certain behaviour easier, nudges can support the development of stable habits. For example, Carden and Wood discuss how dedicating a specific place in the kitchen for fruits and vegetables can increase consumption and contribute to weight loss.

³⁴ Robert Merrihew Adams, *Finite and Infinite Goods* (Oxford University Press, 1999).

³⁵ John Doris, *Lack of Character* (Cambridge University Press, 2002).

³⁶ Lucas Carden and Wendy Wood, "Habit Formation and Change," *Current Opinion in Behavioral Sciences* 20 (2018): 119-120.

Similarly, mechanisms of conditioning and reinforcement suggest that external factors can meaningfully contribute to changes in behaviour that can be stabilized over time. In short, although contextual factors may affect people's actions, nudging can significantly contribute to cultivating general – and, by extension, virtuous – habits. However, for such habits to qualify as virtues in the Aristotelian sense, they must not only be context-dependent but also stable across varying circumstances and endorsed through reflection. Thus, virtue-conducive nudges which incorporate reflective components can transform situational habits into consciously sustained dispositions. This ensures that the behaviours formed through nudging meet Aristotle's criteria for virtuous action.

Therefore, we contend that virtues should be taken seriously in ethical discussions of nudging. Virtues are not merely admirable traits that influence actions but constituents of a flourishing life. From a philosophical standpoint, virtues offer a way to connect practical reasoning with flourishing life and meaningful goals. In addition to that, nudging operates within specific contexts and aims to steer individuals' behaviour by gentle interventions in a choice architecture within the libertarian paternalism framework. We will elaborate that even if behaviour varies across situations, nudges can still provide opportunities for individuals to reflect and cultivate virtues. In the context of nudging, although behaviour may be influenced by external factors, virtues equip individuals to act in ways that align with their broader values of life as a whole. The following section explores the notion of '*eudaimonia*' in Aristotle's ethics and examines how nudging can contribute to achieve *eudaimonia*.

i. Eudaimonia

According to Aristotle, just as the good of a flute player, sculptor or any artisan lies in the proper exercise of their distinctive function, the human good appears to depend on the fulfilment of their own distinctive human role or function. This idea is also referred to as the teleological argument, where the Greek word *telos* refers to 'purpose' or 'end.' Teleology is the idea that everything in nature has a function, and the good for any being lies in fulfilling that function well. For human beings, this function involves the use of reason and the cultivation of virtues necessary to reason and act well. Human life has an active element of life, which is distinct from plants and animals. This element has two parts: one is "in the sense of being obedient to reason, the oth-

er in the sense of possessing reason and exercising thought.”³⁷ In this way, the *telos* of human life is the highest human good or *eudaimonia*, which is defined as the “activity of soul exhibiting virtue, ... in a complete life.”³⁸

The *Nicomachean Ethics* is an inquiry about human goods. Aristotle considers the highest of all goods achievable by action to be ‘*eudaimonia*,’ which is often translated as ‘happiness’ or ‘flourishing.’³⁹ For Aristotle, moral character is about cultivating qualities or virtues that enable individuals to live a flourishing human life or achieve ‘*eudaimonia*.’ Aristotle’s description of *eudaimonia* reveals two essential characteristics. Firstly, it is an activity, not a passive state, and secondly, it requires a life shaped by virtues, not merely episodic good deeds. That is to say, *eudaimonia* is something that must be actively sought over time through rational choices, habits and reflective living. *Eudaimonia* has both moral and practical dimensions because flourishing requires not only a virtuous character that aims at the right ends, but also practical wisdom to choose the right means in action. The following sections explore two different dimensions of *eudaimonia* and investigate whether nudging contributes to the cultivation of moral character and eventually leads to *eudaimonia*.

a. Moral dimension of *eudaimonia*

The moral dimension in the context of *eudaimonia* refers to the development of virtuous character dispositions to think and act rightly for the right reasons in different contexts. These dispositions include both the classical cardinal virtues – prudence, justice, temperance, and courage – and social virtues such as generosity, honesty, and compassion. ‘To exhibit virtue’ means synchronizing one’s rational and emotional faculties rather than suppressing them and acting rationally. A person who acts rightly out of fear or without awareness may achieve good results but may not flourish. A flourishing person takes joy in doing what is right because his character has been formed to value the good. Snow argues:

If we have a proper upbringing, we will become habituated to perform virtuous actions and to take pleasure in doing virtuous things. Eventually, we will act virtuously not for

³⁷ Aristotle, *The Nicomachean Ethics*, trans. David Ross (Oxford University Press, 2009), 1098a3-4.

³⁸ Ibid., 1098a16-18.

³⁹ Ibid., x.

the sake of the pleasure involved but for the sake of doing the right thing; that is, we will act virtuously because we see the value of virtuous action in its own right.⁴⁰

Consider a nudge in the form of a default setting that promotes organ donation. If people are well aware of such default settings and voluntarily endorse them upon reflection, then the action may be considered morally right, and it may also create an altruistic norm in society. This nudge may result in a higher participation rate and may align with the virtue of generosity and altruistic behaviour among individuals. However, if agents are not properly aware or act without volition, such actions may lack moral worth in the Aristotelian virtue ethics framework. The reason, according to Aristotle, is:

The agent also must be in a certain condition when he does them (acts); in the first place he must have the knowledge; secondly he must choose the acts, and choose them for their own sakes, and thirdly his action must proceed from a firm and unchangeable character.⁴¹

That is to say, in the Aristotelian framework, virtuous actions must be performed through deliberate choice for the right reasons and from a stable moral character. However, scholars such as Driver challenge the role of rationality in virtue. Driver states, “Why can’t virtue depend as much on what the agent fails to see as on what the agent sees?”⁴² She discusses the virtues of ignorance, such as modesty and blind charity, where agents may lack sensitivity to rational considerations while still possessing these virtues. Similarly, in the context of nudging, individuals’ behaviour or choices may be steered towards better outcomes. Depending on specific nudging techniques, such nudges can also contribute to the cultivation of virtues. Initially, individuals may not be fully aware of their choices, but after experiencing positive outcomes, they may endorse and repeat the same choices voluntarily. If they are not satisfied with the nudged options, they remain free to opt out, since nudges are grounded on the principle of libertarian paternalism, where individuals’ freedom of choice is preserved.

⁴⁰ Nancy E. Snow, “Should Virtue Be Promoted by Nudging?” in *Studia Humaniora LXXVIII: Per un nudging etico: Autonomia, virtù e persuasione sociale*, ed. Antonio Scopettuolo (Orthotes, 2024).

⁴¹ Aristotle, 1105a30-32.

⁴² Driver, 39.

b. Practical dimension of eudaimonia

The practical dimension of eudaimonia refers to the use of the capacity of *phronesis*, or practical wisdom, to make rational and morally sound decisions. For individuals to exhibit virtues, their choices and decisions must be guided by *phronesis*. Therefore, it is crucial to develop *phronesis*, virtuous motivations, and regulated emotional responses to cultivate and sustain a virtuous character.⁴³ These elements work together to guide individuals in making moral decisions and acting in accordance with virtue. This practical dimension recognizes that flourishing is not only about possessing virtues but also about applying them appropriately in real life. This application of practical wisdom may involve balancing competing virtues, regulating one's impulses, and prioritizing long-term goals over short-term temptations. All of these elements are very relevant in the context of nudging. If nudges can scaffold the development of practical wisdom, they can aid not only immediate welfare but also the formation of good judgement.

Aristotle further maintains that to achieve human flourishing or eudaimonia, external goods are also important in addition to virtues.⁴⁴ As he states, “Yet evidently, [...] it needs the external goods as well; for it is impossible, or not easy, to do noble acts without the proper equipment.”⁴⁵ He argues that we use external goods such as good friends, family, noble birth, wealth, political power and physical attractiveness as instruments which contribute to our ability to live well and take pleasure in virtuous actions.⁴⁶ Thus, a component that plays a significant role in the process of attaining the telos of human life, eudaimonia, is an external good. This recognition of the importance of external goods also has significant relevance in the context of nudging because several nudging interventions are designed precisely to help individuals secure or better manage the external goods, which are essential to living a flourishing life. For example, nudges that promote healthy eating, retirement savings or collective social welfare directly support securing the external goods such as health, financial security and social support, as referred to by Aristotle. Moreover, nudging interventions can also support the cultivation of virtues by creating conducive scenarios under which reflective moral choices and virtu-

⁴³ Snow, 5-42.

⁴⁴ Pia Valenzuela, “Fredrickson on Flourishing through Positive Emotions and Aristotle’s Eudaimonia,” *Conatus – Journal of Philosophy* 7, no 2 (2022): 37-61.

⁴⁵ Aristotle, 1099a30.

⁴⁶ Nancy E. Snow, “Virtue and Flourishing,” *Journal of Social Philosophy* 39, no. 2 (2008): 225-245.

ous actions become easier, and this point will be discussed in detail in Section III. Ultimately, there is a conceptual link between Aristotle's notion of external goods, which are needed for eudaimonia and the promotion of welfare through nudging using the framework of libertarian paternalism and nudging may be viewed as a design which helps the stakeholders move closer while pursuing eudaimonia. In the next section, we will discuss virtue in the Aristotelian framework and then analyse the definition of nudging.

ii. Aristotelian virtues and nudging

According to Aristotle, there are two kinds of virtues: intellectual and moral virtues.

Intellectual virtue in the main owes both its birth and its growth to teaching (for which reason it requires experience and time), while moral virtue comes about as a result of habit.⁴⁷

As Aristotle mentions, intellectual virtues can be taught, and they are qualities of the mind that help people to understand the world and make their judgments. Some examples of intellectual virtues include *scientific knowledge, practical wisdom, philosophic wisdom, and intuitive reason*.⁴⁸

On the other hand, moral virtues are learned by habit.⁴⁹ We cannot acquire moral virtues by nature. Aristotle further explains:

From this it is also plain that none of the moral virtues arises in us by nature; for nothing that exists by nature can form a habit contrary to its nature. For instance, the stone which by nature moves downwards cannot be habituated to move upwards, not even if one tries to train it by throwing it up ten thousand times. [...] Neither by nature, then, nor contrary to nature do the virtues arise in us; rather we are adapted by nature to receive them, and are made perfect by habit.⁵⁰

⁴⁷ Aristotle, 1103a15.

⁴⁸ Ibid., 1139b15.

⁴⁹ Bart Engelen and Thomas R. V. Nys, "Pushed for Being Better: On the Possibility and Desirability of Moral Nudging," *The Journal of Value Inquiry* (2024): 1-27.

⁵⁰ Aristotle, 1103a20-25.

From childhood, individuals learn various social and practical skills by repeating actions over time. When people perform an action regularly, it gradually becomes a habit for them. Aristotle defines moral virtues as “a state of character, not a passion nor a capacity.”⁵¹ Some of the examples of moral virtues include courage, temperance, generosity, and honesty. It is important to note that in the context of nudging, this paper focuses on moral virtues because they can be cultivated through habituation, which nudging has the potential to foster. Carden and Wood explain:

Habits form as people pursue goals in daily life. When repeatedly performing a behavior in a particular context, people develop implicit associations in memory between contexts and responses.⁵²

Wood & Runger state, “Once habits form, perception of the context automatically brings the response to mind, and people often carry out that response.”⁵³ It means that habits develop through repeated goal-oriented behaviour in specified contexts. Once formed, they trigger automatic responses whenever those contexts are encountered. Similarly, moral virtues can be cultivated by repeatedly doing certain things, such as courageous acts. An individual who repeatedly acts courageously will become courageous, and that person may find it easy to act courageously when required.

Aristotle defines a virtue as the mean between two extremes: a deficiency and an excess. This mean, which is also known as the ‘Golden Mean,’ represents the ideal state between two undesirable extremes. Aristotle explains:

Virtue, then, is a state of character concerned with choice, lying in a mean, i.e., the mean relative to us, this being determined by reason, and by that reason by which the man of practical wisdom would determine it. Now it is a mean between two vices, that which depends on excess and that which depends on defect.⁵⁴

⁵¹ Ibid., 1105b19.

⁵² Lucas Carden and Wendy Wood, “Habit Formation and Change,” *Current Opinion in Behavioral Sciences* 20 (2018): 117.

⁵³ Wendy Wood and Dennis Runger, “Psychology of Habit,” *The Annual Review of Psychology* 67 (2016): 289-314.

⁵⁴ Aristotle, 1107a1-2.

For instance, courage is the mean between cowardice (deficiency) and recklessness (excess). Similarly, generosity is the mean between stinginess and extravagance. Individuals develop these virtues through experience and practice. These virtues enhance an agent's ethical decision-making ability, which, in turn, will lead to a flourishing life (eudaimonia). However, Aristotle acknowledges that attaining virtue is not an easy task. As he states,

But this is no doubt difficult, and especially in individual cases; for it is not easy to determine both how and with whom and on what provocation and how long one should be angry; for we too sometimes praise those who fall short and call them good-tempered, but sometimes we praise those who get angry and call them manly.⁵⁵

Thus, it requires discernment and wisdom to determine the mean in every situation. To find the right balance is very significant and difficult at the same time. The difficulty lies in complex situations where moral reasoning is essential to determine the right course of action. A virtuous person must cultivate not only the right habits but also the wisdom to apply them appropriately in different contexts.

We have already seen that virtues are cultivated through repeated actions. Let us now analyse how certain external interventions, such as nudges, can play a significant role in shaping behavioural patterns that can contribute to the cultivation of virtues in individuals. To assess the possibility, it is important to first analyse the definition and necessary characterizations of nudge. According to Thaler and Sunstein, nudge is defined as follows:

A nudge, [...] is any aspect of the choice architecture that alters people's behavior 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 taxes, fines, subsidies, bans or mandates. Putting the fruit at eye level counts as a nudge. Banning junk food does not.⁵⁶

By referring to the aforementioned definition, one precondition and

⁵⁵ Ibid., 1109b15-17.

⁵⁶ Richard H. Thaler and Cass R. Sunstein, *Nudge, The Final Edition* (Penguin Books, 2021), 8.

four necessary conditions can be derived for a design to qualify as a nudge.

- a. Precondition: The presence of appropriate choices, with at least two options. A nudge can be designed only if there is more than one option available. That is to say, a choice architect cannot design a nudge if there is only one option.⁵⁷
- b. Necessary conditions: A nudge should:
 1. Have the ability to influence the behaviour or choices of decision-makers through choice architecture.
 2. Not forbid any options,
 - i. Retain all available choices, and
 - ii. Not use any coercion.
 3. Not use any significant economic incentives to sway decision-making.
 4. Be easy to intervene and inexpensive to avoid.

Interventions such as graphic warnings on cigarette packs or health alerts on alcohol bottles are simple examples of nudging. These interventions meet both the precondition and the necessary conditions of nudging mentioned above. By presenting the negative consequences associated with smoking or drinking, such nudges may activate reflective self-regulation and influence individuals' behaviour without any coercion. By discouraging smoking or alcohol consumption, such nudges also foster the virtue of temperance, a capacity to regulate desires and maintain self-control while facing temptations.⁵⁸ Similarly, consumers are nudged and prompted to round up their purchases to the nearest dollar and donate the remaining cents to charitable causes.⁵⁹ Over time, these kinds of nudges instill individuals to practice generosity by donating for the benefit of others. Although these nudges operate subtly, repeated engagement with such behaviours can contribute to the cultivation of virtues aligned with flourishing or eudaimonia.

At this point, it is also significant to understand Aristotle's doctrine of mean that highlights the calibration problem: what counts as

⁵⁷ Karen Renaud and Verena Zimmermann, "Ethical Guidelines for Nudging in Information Security and Privacy," *International Journal of Human-Computer Studies* 120 (2018): 22-35.

⁵⁸ Aristotle, 1118a-1119b. Andy Mullins, "What Does Self-control Look Like? Considerations about the Neurobiology of Temperance and Fortitude," *Conatus – Journal of Philosophy* 10, no. 1 (2025): 165-191.

⁵⁹ Katie Kelting, Robinson Stefanie, and Richard J. Lutz, "Would you Like to Round up and Donate the Difference? Roundup Requests Reduce the Perceived Pain of Donating," *Journal of Consumer Psychology* 29, no. 1 (2019): 70-78.

the appropriate mean can vary across persons and contexts, so interventions must avoid pushing agents towards either excess or deficiency. That is to say, a virtue-conducive nudge that is designed to promote one virtue should not produce deficiencies in other virtues. Kuyer and Gordijn point out the issue of infantilization and state that prolonged exposure to multiple nudges may affect agents' capabilities for autonomous decision-making.⁶⁰ Over influence of nudges might lead individuals towards dependency and make them passive rather than encouraging moral agency. Similarly, if virtue-conducive nudges such as charity promotion nudges become ubiquitous, they may reduce individuals' reflective giving and undermine prudence. These concerns reveal the potential trade-off between virtues and underscore the practical role of *phronesis*. Therefore, virtue-conducive nudges must be designed carefully to ensure that, while promoting virtue, they do not exceed the mean or displace reflective judgement. In this regard, *phronesis* serves as the guiding principle for policy designers to balance competing virtues by exercising contextual discernment rather than applying uniform behavioural rules. Policymakers must continually evaluate the proportionality and context-sensitivity of nudges through empirical feedback and ethical reflection to ensure they remain aligned with the mean. The following section analyses the contributing factors to eudaimonia and examines their relationship with nudging.

III. Factors contributing to eudaimonia: Virtues and welfare

The cultivation of virtues and developing a virtuous character are traditionally considered essential elements for achieving eudaimonia. For example, the virtue of temperance may guide individuals towards healthy eating habits, and such good habits may lead to good health. Similarly, prudence can lead to personal welfare. Since virtue lies between two extremes – excess and deficiency, it is challenging to navigate this golden mean and become a virtuous person. It is difficult and complex to choose the right course of action in each circumstance because it requires discernment and moral sensitivity. When individuals make irrational decisions under the influence of cognitive biases or a lack of *phronesis*, there is a disruption in this delicate equilibrium, and the agents may drift towards vice. Consider the case of present bias. Present bias refers to individuals' tendency to focus on the present results of their actions while ignoring future consequences. As a result,

⁶⁰ Paul Kuyer and Bert Gordijn, "Nudge in Perspective: A Systematic Literature Review on the Ethical Issues with Nudging," *Rationality and Society* 35, no. 2 (2023): 191-230.

people may prioritize immediate rewards over long-term benefits, even if the long-term choice aligns better with their overall goals.⁶¹ Some examples of such cases are accumulating credit card debt, consuming unhealthy foods, and engaging in environmentally harmful behaviours.⁶² Over time, such habitual patterns can result in a lack of temperance, which may further lead to self-indulgence. Similarly, status quo bias causes people to stick with the existing state of affairs.⁶³ An employee who witnesses unethical behaviour in the workplace, such as discrimination, data manipulation or abusive behaviour, may still choose not to report and remain with the status quo to avoid conflicts. Such decisions, which are guided by fear of consequences or inertia, may result in a harmful work culture in the long run. In such cases, a nudge in the form of an anonymous reporting mechanism can gently prompt individuals to overcome status quo bias and act with moral courage and integrity. By lowering the psychological and practical barriers to action, such nudging mechanisms may foster the cultivation of virtues such as courage, honesty and justice.

The importance of external goods, such as health, friendship, and material resources, in achieving eudaimonia, in addition to cultivating virtues, has already been discussed in the previous section. These external goods can be conceptually subsumed under the broader category of welfare because all these elements provide the necessary means that contribute to the welfare of individuals. In this context, welfare is not limited to material wealth or state assistance; rather, it refers to the comprehensive background conditions – social, economic and psychological – that support individuals in living flourishing lives. As Snow states, these external goods serve as instrumental enablers that guide individuals towards virtuous activity and allow them to take genuine pleasure in virtuous actions.⁶⁴ Thus, welfare, understood in terms of external goods, plays a foundational role in the practice of virtue and, ultimately, attaining *eudaimonia*.

To examine the relationship between virtue, welfare and nudging, it is essential to understand the welfare in the context of nudging. Sunstein provides an account of welfare in nudging by describing what

⁶¹ Serdar Sayman and Ayse Öncüler, “An Investigation of Time Inconsistency,” *Management Science* 55, no. 3 (2008): 470-482.

⁶² David J. Hardisty, Kirstin C. Appelt, and Elke U. Weber, “Good or Bad, We Want it Now: Fixed-cost Present Bias for Gains and Losses Explains Magnitude Asymmetries in Intertemporal Choice,” *Journal of Behavioral Decision Making* 26, no. 4 (2013): 348-361.

⁶³ Samuelson and Zeckhauser.

⁶⁴ Snow, “Virtue and Flourishing.”

it means for people to be ‘better off.’⁶⁵ He states, “If people can live longer lives, have less illness and pain, and be free from serious mental health problems, they are better off.”⁶⁶ He further elaborates, “Early death, illness, sickness, accidents, and poverty are bad, and richer is better than poorer.”⁶⁷ This means that Sunstein’s concept of welfare in nudging is primarily understood through a set of objective indicators such as health, longevity, safety from accidents, wealth and economic stability. These indicators also provide a suitable environment and create necessary conditions for individuals to pursue their goals, form good habits and exercise their virtues. Thus, these indicators not only enable individuals to make good choices but also help them to flourish. In other words, the concept of welfare is not only instrumental but also constitutive of a flourishing life. All these components provide the foundation for a fulfilling life and contribute to individuals’ quality of life. Therefore, these are inherently beneficial and recognized for a safe, stable and thriving life. The concept of welfare in nudging aligns closely with the Aristotelian notion of external goods required for eudaimonia. Eudaimonia is not reducible to momentary pleasure; rather, it includes sustained welfare and moral development of character in the long run. Similarly, welfare-oriented nudges, which aim at improving decisions about health, wealth and happiness, as highlighted in the subtitle of the book *Nudge*, contribute to this broader view of human flourishing.⁶⁸ In what follows, we shall illustrate two pathways which will be used for analyzing the relationship between nudging, welfare and virtue.

i. The interplay of nudging, welfare and virtue: First pathway

The first pathway examines how certain nudging interventions that primarily aim at enhancing welfare related to health, safety and economic stability indirectly contribute to the cultivation of virtues. To explore and analyse the relationship between welfare-enhancing nudges and virtue development, insights from behaviour psychology, particularly the notion of conditioning and reinforcement, are very significant. Mechanisms such as conditioning and reinforcement explain how external factors or stimuli can shape and stabilize behaviour over time.

⁶⁵ Cass R. Sunstein, “Welfare Now,” *Duke Law Journal* 72, no. 8 (2023): 1643-1672.

⁶⁶ Ibid., 1658.

⁶⁷ Ibid., 1659.

⁶⁸ Richard H. Thaler and Cass R. Sunstein, *Nudge: Improving Decisions about Health, Wealth, and Happiness* (Yale University Press, 2008).

In the classic example of Pavlov, a bell that is consistently followed by the delivery of food eventually triggers salivation in dogs.⁶⁹ On this foundation, Skinner suggests operant conditioning, according to which the behaviour is shaped by the consequences that follow it.⁷⁰ When a particular behaviour is followed by a positive reinforcement or a favourable outcome, that behaviour is more likely to be repeated in the future. Skinner states:

If eating a particular kind of food has had survival value (such as that which explains the behavior of eating the food), an increased tendency to eat because the taste of the food has become a reinforcer should have had survival value.⁷¹

The good taste acts as a positive reinforcement, which makes people repeat the behaviour of eating it again. Skinner's study shows that over time, the ability to learn from consequences helps individuals to develop stable behavioural patterns. Similarly, individuals often resist engaging in apparently simple actions, such as eating healthy food, exercising, or saving money, because of inertia, uncertainty, or a lack of motivation. However, once they start performing these actions and experience the positive outcomes, they are more likely to repeat them by reflective practical reasoning. Through repeated experiences, people learn which actions lead to positive outcomes and which lead to negative outcomes. Gradually, these learning conditions help individuals to behave in the same manner even when there are not enough stimuli available to guide them.

These insights from behavioural conditioning are very relevant to understanding how nudging can influence behaviour in real-world contexts. Consider the classic example of placing healthier food at the eye level to promote healthy eating. This intervention in choice architecture leverages inertia – people's tendency to pick up easily accessible options – making it easier to choose healthy foods. As individuals begin to choose these options more often, such repeated behaviour is gradu-

⁶⁹ Ivan Pavlov's classic experiment demonstrated classical conditioning by training dogs to salivate at the sound of a bell. Initially, the bell was a neutral stimulus and did not cause any reaction. However, when the sound of the bell was repeatedly paired with food, the dogs began to salivate at the sound of the bell alone. This experiment shows that behaviour can be shaped through a conditioned stimulus, which can trigger a conditioned response.

⁷⁰ B. F. Skinner, "The Evolution of Behavior," *Journal of the Experimental Analysis of Behavior* 41, no. 2 (1984): 217-221.

⁷¹ Ibid., 219.

ally reinforced through positive outcomes. After eating healthier food, individuals may experience the benefits, such as feeling physically better and more energetic. These benefits serve as natural reinforcements that strengthen the behavioural pattern. Over time, this repeated association between healthy foods and these positive outcome conditions individuals to favour such choices habitually. In other words, leveraging inertia can condition individuals towards stable, good eating habits and help to cultivate the virtue of temperance or self-control.

It is important to note that virtues should not be confused with habits that are merely productive or beneficial. Virtue should be understood as constitutive of the way an agent lives her life as a result of her own decisions.⁷² Just as memory is constitutive of identity, virtues are constitutive of an agent's way of life. We do not view memory simply as an instrument only for performing certain actions; rather, it is an integral part of who we are. Similarly, virtues are not merely means to achieve good outcomes. Virtue production is about the cultivation of habitually based dispositions to action – rational, affective, and evaluative. These dispositions help individuals to develop a stable, good character over a period of life. Nudges, which are primarily aimed at steering individuals towards choices that are broadly beneficial for them, may not directly target the development of stable virtues. However, they can still serve as a supportive design by encouraging behaviours that align with long-term welfare. Nudges, based on the principle of libertarian paternalism, offer opportunities for individuals to engage in reflection, evaluate their actions, and progressively cultivate virtues that guide them towards eudaimonia. Similarly, Kniess states:

Default rules can also shape preferences by enabling experiences; in other words, a decision maker might ‘try it and like it.’ The ‘mere-exposure effect,’ which is well documented in the social psychological literature, can lead people to develop preferences and positive affective reactions through repeated exposure to a given stimulus.⁷³

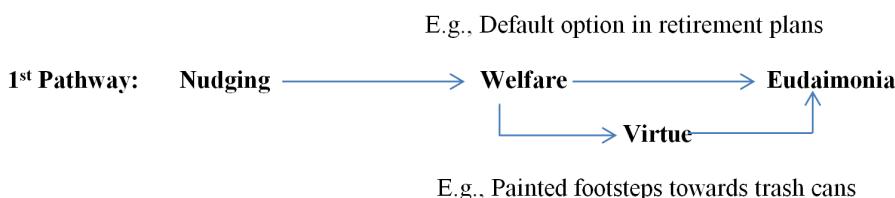
In other words, when people try the nudged option and experience the positive effects, they may choose to continue the same actions even in the absence of a nudged choice architecture. That is to say, nudges – such as the strategic arrangement of food items or the default setting

⁷² Annas.

⁷³ Johannes Kniess, “Libertarian Paternalism and the Problem of Preference Architecture,” *British Journal of Political Science* 52, no. 2 (2022): 925.

in a retirement savings plan – primarily enhance the welfare in terms of individuals' health or wealth, while secondarily, the resulting habitual practices further contribute to the cultivation of the virtue of temperance.

Thus, nudges of a similar sort of act as non-coercive reinforcements that influence individuals' choices for their welfare. Such nudges serve as a form of moral conditioning that helps individuals develop virtuous habits through practice and enables them to act virtuously. Welfare and virtues are necessary conditions for attaining eudaimonia. Welfare ensures the presence of external goods and helps create favourable conditions for living a flourishing life, and virtues shape moral character and guide individuals towards right actions. When individuals possess virtues and have access to external goods, both of these factors together will lead them closer to attaining eudaimonia. This relation between nudging, welfare and virtues can be illustrated in the form of the first pathway as follows:



As illustrated in the first pathway, a nudging intervention can be used primarily to promote welfare, and at the same time, the intervention can also support the cultivation of virtues. Consider an example where painted footsteps subtly guide individuals towards trash cans in public parks. These visual nudges steer individuals to dispose of litter properly without coercion. While the primary aim of this nudge is to promote societal welfare by encouraging public cleanliness, repeated exposure to such nudges may gradually shape individuals' character and reinforce virtues like responsibility, discipline, and respect for public places. Similarly, an empirical study conducted by Bhattacharya et al. concludes that nudging serves as a promising approach “to induce exercise habit formation, which is an important public health goal.”⁷⁴ The authors point out that the effectiveness of nudges may vary based on the differences in individual personality traits.

⁷⁴ Jay Bhattacharya, Alan M. Garber, and Jeremy D. Goldhaber-Fiebert, “Nudges in Exercise Commitment Contracts: A Randomized Trial,” *National Bureau of Economic Research Working Paper*, July 2015.

Consider the case of automatic enrollment in a retirement savings plan. In this case, employees are nudged to participate in the retirement savings plan by making a change in the default settings. This nudge influences employees to save more by encouraging them to remain enrolled. According to Sunstein and Reisch, default rules may work for three contributing factors: (a) Suggestion and endorsement, (b) Inertia, and (c) Reference point and loss aversion.⁷⁵ People may often perceive default options as recommendations or socially approved practices. Sunstein and Reisch argue that “many people appear to think that the default was chosen by someone sensible and for a good reason.”⁷⁶ Employees may perceive this default setting as a suggestion from the employer and, therefore, endorse this suggestion and choose not to opt out. In addition to that, due to inertia, employees might fail to enroll in the retirement plan even if they intend to. By changing the default setting, the nudge helps individuals to overcome inertia and enhances the enrollment rate. It might seem that a default opt-out setting in a retirement plan merely ensures future financial welfare after retirement by helping individuals to save money in the present time. However, this act of regularly saving money for the future also prompts individuals to cultivate certain virtues, such as temperance and prudence, well before the future welfare is realized. As individuals recognize the rational justification behind the endorsed option and internalize it, they develop prudence in decision-making even though they go with the default option. Furthermore, when employees are directed to save some money every month from their salary, it becomes a habitual practice for them. This practice also helps them to reflect on their long-term financial goals over time and cultivate more prudent approaches to other areas of life, too. Eventually, this practice can also prevent certain vices as well. For instance, when people save some portion of their monthly earnings for a retirement plan, it also helps them reduce their unnecessary consumption and impulsive spending.

At this point, someone might raise a question: “Do people want their social system – whether shaped by government or educational institutions – to be designed in ways that encourage the development of good character by structuring their choices in ways that are likely to achieve individual or societal welfare?” In other words, do people really want choice architects to design choices in ways that may encourage them towards good habits?

⁷⁵ Cass R. Sunstein and Lucia A. Reisch, “Automatically Green: Behavioral Economics and Environmental Protection,” *Harvard Environment Law Review* 38, no. 1 (2014): 127-158.

⁷⁶ *Ibid.*, 140.

These questions lead us to ask another question: Is it possible to have a neutral choice architecture which does not influence individuals' choices? Thaler and Sunstein state that it is a misconception to believe that a neutral choice architecture is possible.⁷⁷ The authors point out that often there are inevitable situations where governments or people in authority design systems or choice architecture for other people, and they argue that such design can never be neutral. They argue that the design of choices, whether intentional or unintentional, will inevitably affect the behaviour or choices of individuals who engage with it. They state, "choice architecture is inevitable."⁷⁸ Sunstein argues that government influences individuals' choices in one way or another, and it ends up "nudging even if it does not want to do so."⁷⁹ Moreover, it is significant to recognize that nudging is grounded in the principle of libertarian paternalism,⁸⁰ where individuals are not coerced to make a particular choice. People are free to make their own decisions and have the option to opt out if they do not want to go with the nudged option. Consider another example of using 'smaller plate sizes in cafeterias' to steer individuals to consume less food without restricting their freedom.⁸¹ When plate sizes are reduced, even a modest portion appears more filling. In this way, this nudge guides individuals to regulate their food intake without any coercion. This results in reduced calorie intake, which directly promotes individuals' welfare in terms of physical health. If someone wants to take more food a second time, they are free to do so. Although this nudging strategy does not eliminate impulsive eating habits, it may help individuals to develop self-restraint over time and develop the virtues of self-control and temperance.

A similar effect can be observed in opt-out organ donation policy, where individuals are automatically enrolled as organ donors. If they wish to opt out, they are free to do so. A study by Johnson and Goldstein demonstrates that such a default-based policy has increased the organ donation rate by reducing the need to actively register,⁸² which

⁷⁷ Thaler, *Nudge*, 14.

⁷⁸ Ibid., 14.

⁷⁹ Cass R. Sunstein, "Nudging and Choice Architecture: Ethical Considerations," *SSRN*, January 6, 2015.

⁸⁰ Richard H. Thaler and Cass R. Sunstein, "Libertarian Paternalism," *American Economic Review* 93, no. 2 (2003): 175-179.

⁸¹ Brian Wansink and Koert Van Ittersum, "Portion Size Me: Plate-Size Induced Consumption Norms and Win-Win Solutions for Reducing Food Intake and Waste," *Journal of Experimental Psychology: Applied* 19, no. 4 (2013): 320-332.

⁸² Eric J. Johnson and Daniel G. Goldstein, "Defaults and Donation Decisions," *Transplantation* 78, no. 12 (2004): 1713-1716.

would involve some psychological barriers, such as hesitation tied to thoughts of mortality. Notably, the primary beneficiary of this nudge is the organ recipient rather than the donor who is nudged. As a result, this nudge primarily promotes prosocial behaviour and enhances societal welfare, which leads to more lives saved and improved health outcomes. Since individuals retain the freedom to opt out, they can deliberately choose whether to remain registered or not. This reflective engagement can also contribute to normalizing altruistic behaviour over time and help individuals develop moral courage, charity, and compassion, as well as a sense of responsibility and solidarity.

In such examples, nudging primarily seems to enhance external goods required for achieving eudaimonia by guiding people toward healthier, safer, or more productive choices which are prosocial. Thus, one interpretation of welfare in the context of nudging is about influencing people to possess or secure such necessary external goods that support a good and flourishing life. At the same time, nudges encourage the repetition of morally desirable behaviour and help to develop virtuous habits. Through this habitual reinforcement, nudging further contributes to cultivating virtues like temperance, responsibility, and discipline, and these virtues take individuals closer to attaining eudaimonia.

ii. Nudge, virtue and welfare: Second pathway

In this second pathway, we will analyze how nudging interventions can act as a catalyst for the cultivation of virtues and subsequently lead to the promotion of welfare. We will discuss examples of nudges that support virtue cultivation and how these virtues lead towards welfare. Snow argues that there are individuals who are already inclined towards virtue but fail to act according to their values despite possessing virtuous inclinations due to various reasons.⁸³ This gap between the inclination and action is not always a matter of willful moral failure, but it arises because of limited cognitive capacity, distractions, decision fatigue, limited information and emotional impulses. Mazar and Hawkins explore behavioural tendencies and point out that people are more likely to engage in dishonest behaviour through omission rather than commission due to the reduced cognitive and physical effort required when one refrains from an action.⁸⁴ The study further suggests

⁸³ Snow, "Should Virtue...," 5-42.

⁸⁴ Nina Mazar and Scott A. Hawkins, "Choice Architecture in Conflicts of Interest: Defaults as Physical and Psychological Barriers to (Dis)honesty," *Journal of Experimental Social Psychology* 59 (2015): 113-117.

that default settings can be designed to promote honest behaviour among individuals “by creating a psychological barrier to dishonesty.”⁸⁵ For example, tax software can be designed to automatically populate available financial data rather than requiring individuals to fill in the information manually into empty fields. This kind of system design requires individuals to deliberately alter the pre-filled information to override it if they want to misrepresent their finances. Such choice architectures create a psychological barrier and internal resistance to dishonesty and introduce a moment of reflection. They make individuals aware of the ethical implications of their choices. Thus, nudges can leverage people’s existing moral inclinations and support them in overcoming biases and temptations in order to act according to their virtuous inclinations. Thus, such nudging interventions can bridge the gap between individuals’ virtuous inclinations and actions by enabling them to reaffirm their commitment to various virtues.

Nudging, therefore, serves as a justified means of cultivating virtues, although virtue promotion is not the primary aim of any nudging. These nudges in the form of virtue-cultivating means help to achieve the welfare-oriented objectives. Snow illustrates this with the example of charitable donation prompts placed near checkout counters.⁸⁶ These cues may encourage individuals to donate while checking out and lead them towards the virtue of generosity. Since such nudges guide people toward choices, they would likely endorse upon reflection, they help bridge the gap between moral intention and action. Snow further states that “For this type of [virtuous] person, who is indeed imperfect, nudging functions as a supplement to, and not as a substitute for, her conscious reasoning capacities.”⁸⁷ These types of nudges empower individuals to align their decisions with their moral commitments. Such nudges are not manipulative interventions that steer people away from their values; rather, they buttress people to live up to their own standards and virtuous conduct. When individuals are repeatedly engaged in acting up on their virtuous inclinations, such as giving, helping or other prosocial behaviour, it is highly likely that eventually, they become habituated to such actions. In line with Skinner’s theory of operant conditioning,⁸⁸ such nudges serve as positive reinforcements by helping individuals cultivate virtuous habits and nurture the virtues they value.

⁸⁵ Ibid., 117.

⁸⁶ Snow, “Should Virtue...,” 5-42.

⁸⁷ Ibid., 30.

⁸⁸ B. F. Skinner, “The Evolution of Behavior,” *Journal of the Experimental Analysis of Behavior* 41, no. 2 (1984): 217-221.

Consider an example of double-sided printing as the default setting. Individuals may perceive it as an environmentally friendly or economic recommendation. They may not choose to opt out of this default unless they specifically want one-sided printing for some special purpose. Moreover, changing the default setting requires some effort from individuals. Therefore, it is more tempting to avoid any change in default and remain with the status quo. Similarly, the default setting frames it as a standard practice. Switching to single-sided printing may also be perceived as a loss of efficiency. Since changing the default setting can be perceived as some kind of loss, individuals tend to avoid changing the default option. So, in this case, loss aversion, rooted in reference points, also reinforces default behaviour. Moreover, this nudge not only encourages sustainable consumption but also helps individuals cultivate the virtue of temperance. In the long run, it contributes to saving the environment and enhancing overall societal welfare, leading individuals closer to attaining eudaimonia.

Here is another example of a workplace nudge that promotes ethical behaviour, such as establishing honesty as the social norm. A study by Shu et al. demonstrates that asking employees to sign a declaration “at the beginning rather than at the end of a self-report [...] significantly reduces dishonesty.”⁸⁹ This kind of intervention places the signature line at the beginning and promotes honesty by reminding individuals of their accountability for the accuracy of the reporting data. This mechanism leverages internal moral cues and makes it harder to justify dishonest behaviour. Any attempt at dishonest behaviour would directly conflict with the moral commitment that individuals have just affirmed. Thus, this nudge promotes self-accountability and guides employees towards honest behaviour. These kinds of nudges can activate self-awareness and remind employees that honesty is a shared moral value in the workplace. Over time, repeated exposure to such nudges may foster the virtue of integrity among employees. When individuals have confidence that others around them are honest, they also develop trust in one another. Honest colleagues serve as admirable exemplars whose character traits are worthy of imitation. Such a culture can shape individuals’ character and promote virtuous motivations.⁹⁰ Subsequently, this practice can strengthen other workplace virtues, such as trust and cooperation. Moreover, the effect of these virtues may lead

⁸⁹ Lisa L. Shu, Nina Mazar, Francesca Gino, Dan Ariely, and Max H. Bazerman, “Retracted: Signing at the Beginning Makes Ethics Salient and Decreases Dishonest Self-reports in Comparison to Signing at the End,” *Proceedings of the National Academy of Sciences* 109, no. 38 (2012): 15197.

⁹⁰ Linda Zagzebski, “Exemplarist Virtue Theory,” *Metaphilosophy* 41, no. 1-2 (2010): 41-57.

to lower monitoring costs, decreased instances of fraud and overall savings for employers. All of these indicators are forms of professional welfare. In addition to that, when employees act with integrity and are perceived as trustworthy, they are more likely to receive positive social feedback, such as respect and recognition from colleagues and supervisors. Such moral affirmation contributes to personal welfare by enhancing job satisfaction and a sense of self-worth.

As these examples demonstrate, nudging can support to develop moral character and virtuous habits by steering people towards virtuous choices. Subsequently, these nudges serve as means to enable individuals to make choices that enhance their own welfare, the welfare of third parties and broader societal welfare. That is to say, the application of certain nudges promotes the cultivation of virtues and welfare. Since virtue and welfare are both essential for a flourishing life in the virtue ethics framework, such nudges can contribute to a flourishing life or eudaimonia. We can illustrate this relation in the form of the second pathway as follows:

E.g., Sign at the beginning of a self-report



E.g., Default printer setting as double-sided printing

Iyer argues that nudges can support the cultivation of virtues through four interconnected steps as follows:

First, they can habituate people to act virtuously in a particular context, making it more likely that they could translate that behavior into their lives more generally. Second, they can shape people's affective responses, prompting positive associations with virtuous behavior and negative associations with vicious behavior. Third, they can aid in the development of practical wisdom, by drawing attention to morally significant features of a situation that might otherwise be neglected. Finally, they can help to furnish the material conditions that may be necessary to express the virtues.⁹¹

⁹¹ Kiran Iyer, "Nudging Virtue," *Southern California Interdisciplinary Law Journal* 26, no. 469 (2016): 478.

In other words, in these four steps, Iyer emphasizes how nudges can support the development of virtue. Nudges can encourage people to practice virtuous habits and shape positive feelings towards virtuous actions. Consequently, they can guide attention to important moral aspects of decisions. They can also provide the right conditions for people to live according to their virtues.

Having said this, it is important to recognize that while many nudges do support virtue cultivation, not all nudges promote virtues. Based on the fundamental principle of libertarian paternalism and the definition provided by Thaler and Sunstein, nudges should preserve their freedom of choice. However, even after the principle and all the conditions of nudging are satisfied, there can be some nudges that may promote welfare but may have little or no connection with the cultivation of virtues. Consider, for instance, a reminder about an optional office meeting related to employees' personality development or recreational activities. Since the meeting is optional, employees may choose to attend the meeting or ignore the reminder. This nudge in the form of a reminder may increase attendance by helping employees to overcome forgetfulness or inertia. However, it does not necessarily contribute to virtue development. Similarly, another example can be a default setting on a computer for automatic software updates. This setting helps users to receive the latest updates without manual intervention, but it does not contribute to virtue cultivation. Thus, we can distinguish nudges into two categories: virtue-conducive nudges and virtue-neutral nudges.

A virtue-conducive nudge is one that not only enhances welfare but also supports individuals in cultivating virtues and developing moral character. Such nudges help individuals develop virtuous habits that persist in the long run, even after the nudge is removed. They also exhibit measurable features such as transparency and opportunities for reflection. In other words, individuals should be aware that they are being nudged, enabling them to recognize and endorse the underlying value. These criteria allow choice architects and researchers to assess whether a nudge merely changes behaviour or genuinely promotes enduring, virtue-based dispositions consistent with *phronesis* and *eudaimonia*. In contrast, virtue-neutral nudges typically focus on improving individuals' behaviour or choices to enhance welfare outcomes without contributing to their moral development. In such cases, welfare outcomes are detached from the individuals' moral development. These nudges tend to remain context-dependent – for instance, printing a fly image in urinals to reduce spillage. Such interventions change behaviour mechanically, without providing opportunities for reflection. Here, the choice architect need not inform individuals that they are being nudged, since the intervention

does not operate through reflective engagement. In case of virtue-conducive nudges, depending on their nature, either pathway is possible in the interplay between nudging, welfare and virtue. Some nudges primarily improve welfare, which subsequently foster virtuous habits. Whereas other nudges first cultivate virtues, which, in turn, enhance welfare. Thus, virtue-conducive nudges are able to promote welfare and cultivate virtues, ultimately leading to a flourishing life – eudaimonia.

IV. Conclusion

This paper has explored the nudging practices through the lens of the virtue ethics framework. We have analyzed how nudging interventions, which primarily aim at promoting the welfare of the stakeholders, can also contribute to the cultivation of virtues. Nudging interventions are based on the principle of libertarian paternalism and are not only limited to the welfare of the stakeholders but also have an extended moral significance beyond mere utility. In the Aristotelian framework, both welfare and virtues are essential for achieving eudaimonia or human flourishing. We identify virtue-conducive nudges that play a significant role in supporting individuals to live a flourishing life and achieve eudaimonia. We have distinguished two possible pathways that illustrate the relationship between nudging, welfare, and virtue. In the first pathway, certain nudges steer individuals towards choices that directly promote welfare – such as better health. Over time, these nudges also support the cultivation of virtues like temperance or prudence. In the second pathway, certain nudges initially shape moral character and encourage virtuous habits such as honesty and integrity and subsequently, these nudges lead to better welfare outcomes for both individuals and society. We acknowledge that some nudges may have little or no role towards the cultivation of virtues. To account for this, we distinguish between virtue-conducive and virtue-neutral nudges. Ultimately, when choice architects carefully design nudges, these interventions can serve as a design that promotes welfare and supports individuals to cultivate virtues, which in turn help them to live a flourishing life. In this way, nudging can be ethically justified within a virtue ethics framework since at least virtue-conducive nudges can meaningfully contribute to the moral life of nudges.

Acknowledgements

We would like to express our sincere gratitude to Dr Bijoy Baruah and Dr Samrat Rao for their invaluable insights and for the constructive discussions that greatly supported the development of this paper.

Author contribution statement

Both authors have contributed equally to the conception and design of the work, the drafting and revising of the manuscript, and the final approval of the version to be published.

References

Adams, Robert Merrihew. *Finite and Infinite Goods*. Oxford University Press, 1999.

Annas, Julia. "Virtue Ethics." In *The Oxford Handbook of Ethical Theory*, edited by David Copp, 515-536. Oxford Academic, 2007. doi: <https://doi.org/10.1093/oxfordhb/9780195325911.003.0019>.

Aristotle. *The Nicomachean Ethics*. Translated by David Ross. Oxford University Press, 2009.

Bhattacharya, Jay, Alan M. Garber, and Jeremy D. Goldhaber-Fiebert. "Nudges in Exercise Commitment Contracts: A Randomized Trial." *National Bureau of Economic Research Working Paper*, July 2015. doi: <https://doi.org/10.3386/w21406>.

Bovens, Luc. "The Ethics of Nudge." In *Preference Change: Approaches from Philosophy, Economics and Psychology*, edited by Till Grüne-Yanoff and Sven Ove Hansson, 207-219. Springer, 2009. doi: https://doi.org/10.1007/978-90-481-2593-7_10.

Carden, Lucas, and Wendy Wood. "Habit Formation and Change." *Current Opinion in Behavioral Sciences* 20 (2018): 119-120. doi: <https://doi.org/10.1016/j.cobeha.2017.12.009>.

Chappell, Timothy. *Knowing what to Do: Imagination, Virtue, and Platonism in Ethics*. Oxford University Press, 2014.

Doris, John. *Lack of Character*. Cambridge University Press, 2002.

Driver, Julia. *Uneasy Virtue*. Cambridge University Press, 2001.

Engelen, Bart, and Thomas R. V. Nys. "Pushed for Being Better: On the Possibility and Desirability of Moral Nudging." *The Journal of Value Inquiry* (2024): 1-27. doi: <https://doi.org/10.1007/s10790-023-09977-y>.

Engelen, Bart, and Thomas R. V. Nys. "Nudging and Autonomy: Analyzing and Alleviating the Worries." *Review of Philosophy and Psychology* 11 (2020): 152. doi: <https://doi.org/10.1007/s13164-019-00450-z>.

Grüne-Yanoff, Till. "Old Wine in New Casks: Libertarian Paternalism still Violates Liberal Principles." *Social Choice and Welfare* 38 (2012): 635-645. doi: <https://doi.org/10.1007/s00355-011-0636-0>.

Hacker, Philipp. "Nudging and Autonomy: A Philosophical and Legal Appraisal." In *Research Methods in Consumer Law*, edited by Hans-W. Micklitz, Anne-Lise Sibony, and Fabrizio Esposito, 77-118. Edward Elgar Publishing, 2018. doi: <https://doi.org/10.4337/9781785366611.00008>.

Hardisty, David J., Kirstin C. Appelt, and Elke U. Weber. "Good or Bad, We Want it Now: Fixed-cost Present Bias for Gains and Losses Explains Magnitude Asymmetries in Intertemporal Choice." *Journal of Behavioral Decision Making* 26, no. 4 (2013): 348-361. doi: <https://doi.org/10.1002/bdm.1771>.

Hausman, Daniel M., and Brynn Welch. "Debate: To Nudge or Not to Nudge." *Journal of Political Philosophy* 18, no. 1 (2010): 135. doi: <https://doi.org/10.1111/j.1467-9760.2009.00351.x>.

Hursthouse, Rosalind, and Glen Pettigrove. "Virtue Ethics." In *Stanford Encyclopedia of Philosophy*, edited by Edward N. Zalta and Uri Nodelman, 2022, <https://plato.stanford.edu/archives/fall2023/entries/ethics-virtue/>.

Iyer, Kiran. "Nudging Virtue." *Southern California Interdisciplinary Law Journal* 26, no. 469 (2016): 469-492.

Johnson, Eric J., and Daniel G. Goldstein. "Defaults and Donation Decisions." *Transplantation* 78, no. 12 (2004): 1713-1716.

Kant, Immanuel. *Groundwork of the Metaphysics of Morals*. Edited by Mary Gregor. Cambridge University Press, 2006.

Kelting, Katie, Stefanie Robinson, and Richard J. Lutz. "Would You Like to Round up and Donate the Difference? Roundup Requests Reduce the Perceived Pain of Donating." *Journal of Consumer Psychology* 29, no. 1 (2019): 70-78. doi: <https://doi.org/10.1002/jcpy.1064>.

Kniess, Johannes. "Libertarian Paternalism and the Problem of Preference Architecture." *British Journal of Political Science* 52, no. 2 (2022): 921-933. doi: <https://doi.org/10.1017/S0007123420000630>.

Kuyer, Paul, and Bert Gordijn. "Nudge in Perspective: A Systematic Literature Review on the Ethical Issues with Nudging." *Rationality and Society* 35, no. 2 (2023): 191-230. doi: <https://doi.org/10.1177/10434631231155005>.

MacKinnon, Barbara, and Andrew Fiala. *Ethics: Theory and Contemporary Issues*. Cengage Learning, 2009.

Mazar, Nina, and Scott A. Hawkins. "Choice Architecture in Conflicts of Interest: Defaults as Physical and Psychological Barriers to (Dis)honesty." *Journal of Experimental Social Psychology* 59 (2015): 113-117. doi: <https://doi.org/10.1016/j.jesp.2015.04.004>.

Merrit, Maria. "Virtue Ethics and Situationist Personality Psychology." *Ethical Theory and Moral Practice* 3, no. 4 (2000): 365-383. doi: <https://doi.org/10.1023/A:1009926720584>.

Michaelsen, Patrik, Lars-Olof Johansson, and Martin Hedström. "Experiencing Default Nudges: Autonomy, Manipulation, and Choice-satisfaction as Judged by People Themselves." *Behavioural Public Policy* 8, no. 1 (2024): 85-106. doi: <https://doi.org/10.1017/bpp.2021.5>.

Mullins, Andy. "What Does Self-control Look Like? Considerations about the Neurobiology of Temperance and Fortitude." *Conatus – Journal of Philosophy* 10, no. 1 (2025): 165-191. doi: <https://doi.org/10.12681/cjp.36665>.

Murdoch, Iris. *The Sovereignty of Good*. Routledge, 1971.

Oswald, Margit E., and Stefan Grosjean. "Confirmation Bias." In *Cognitive Illusions: A Handbook of Fallacies and Biases in Thinking, Judgment and Memory*, edited by R. F. Pohl, 79-83. Psychology Press, 2004. doi: <https://doi.org/10.13140/2.1.2068.0641>.

Renaud, Karen, and Verena Zimmermann. "Ethical Guidelines for Nudging in Information Security and Privacy." *International Journal of Human-Computer Studies* 120 (2018): 22-35. doi: <https://doi.org/10.1016/j.ijhcs.2018.05.011>.

Samuelson, William, and Richard Zeckhauser. "Status Quo Bias in Decision Making." *Journal of Risk and Uncertainty* 1 (1988): 7-59. doi: <https://doi.org/10.1007/BF00055564>.

Sayman, Serdar, and Ayse Öncüler. "An Investigation of Time Inconsistency." *Management Science* 55, no. 3 (2008): 470-482. doi: <https://doi.org/10.1287/mnsc.1080.0942>.

Shu, Lisa L., Nina Mazar, Francesca Gino, Dan Ariely, and Max H. Bazerman. "Retracted: Signing at the Beginning Makes Ethics Salient and Decreases Dishonest Self-reports in Comparison to Signing at the End." *Proceedings of the National Academy of Sciences* 109, no. 38 (2012): 15197-15200. doi: <https://doi.org/10.1073/pnas.1209746109>.

Skinner, B. F. "The Evolution of Behavior." *Journal of the Experimental Analysis of Behavior* 41, no. 2 (1984): 217-221. doi: <https://doi.org/10.1901/jeab.1984.41-217>.

Slote, Michael. *Morals from Motives*. Oxford University Press, 2001.

Snow, Nancy E. "Should Virtue Be Promoted by Nudging?" In *Studia Humaniora LXXVIII: Per un nudging etico: Autonomia, virtù e persuasione sociale*, edited by Antonio Scoppettuolo. Orthotes, 2024.

Snow, Nancy E. "Virtue and Flourishing." *Journal of Social Philosophy* 39, no. 2 (2008): 225-245. doi: <https://doi.org/10.1111/j.1467-9833.2008.00425.x>.

Sunstein, Cass R., and Lucia A. Reisch. "Automatically Green: Behavioral Economics and Environmental Protection." *Harvard Environment Law Review* 38, no. 1 (2014): 127-158.

Sunstein, Cass R. "Nudging and Choice Architecture: Ethical Considerations." *SSRN*. January 6, 2015, <http://ssrn.com/abstract=2551264>.

Sunstein, Cass R. "Welfare Now." *Duke Law Journal* 72, no. 8 (2023): 1643-1672.

Swanton, Christine. *Virtue Ethics: A Pluralistic View*. Oxford University Press, 2003.

Syse, Henrik, and Martin L. Cook. "Robotic Virtue, Military Ethics Education, and the Need for Proper Storytellers." *Conatus – Journal of Philosophy* 8, no. 2 (2023): 667-680. doi: <https://doi.org/10.12681/cjp.35684>.

Thaler, Richard H. *Misbehaving: The Making of Behavioural Economics*. Penguin Books, 2015.

Thaler, Richard H., and Cass R. Sunstein. "Libertarian Paternalism." *American Economic Review* 93, no. 2 (2003): 175-179. doi: <https://doi.org/10.1257/000282803321947001>.

Thaler, Richard H., and Cass R. Sunstein. *Nudge, The Final Edition*. Penguin Books, 2021.

Thaler, Richard H., and Cass R. Sunstein. *Nudge: Improving Decisions about Health, Wealth, and Happiness*. Yale University Press, 2008.

Tversky, Amos, and Daniel Kahneman. "Judgment under Uncertainty: Heuristics and Biases: Biases in Judgments Reveal Some Heuristics of Thinking under Uncertainty." *Science* 185, no. 4157 (1974): 1124-1131. doi: <https://doi.org/10.1126/science.185.4157.1124>.

Valenzuela, Pia. "Fredrickson on Flourishing through Positive Emotions and Aristotle's Eudaimonia." *Conatus – Journal of Philosophy* 7, no 2 (2022): 37-61. doi: <https://doi.org/10.12681/cjp.25202>.

Wansink, Brian, and Koert Van Ittersum. "Portion Size Me: Plate-Size Induced Consumption Norms and Win-Win Solutions for Reducing Food Intake and Waste." *Journal of Experimental Psychology: Applied* 19, no. 4 (2013): 320-332. doi: <https://doi.org/10.1037/a0035053>.

Wood, Wendy, and Dennis Rungger. "Psychology of Habit." *The Annual Review of Psychology* 67 (2016): 289-314. doi: <https://doi.org/10.1146/annurev-psych-122414-033417>.

Zagzebski, Linda. "Exemplarist Virtue Theory." *Metaphilosophy* 41, no. 1-2 (2010): 41-57. doi: <https://doi.org/10.1111/j.1467-9973.2009.01627.x>.

