

## Nudges and nodality tools

Kuehnhanss, Colin Raico

*Published in:*  
Routledge Handbook of Policy Design

*DOI:*  
[10.4324/9781351252928-15](https://doi.org/10.4324/9781351252928-15)

*Publication date:*  
2018

*Document Version:*  
Accepted author manuscript

[Link to publication](#)

*Citation for published version (APA):*  
Kuehnhanss, C. R. (2018). Nudges and nodality tools: New developments in old instruments. In M. Howlett, & I. Mukherjee (Eds.), *Routledge Handbook of Policy Design* (pp. 227-242). Routledge.  
<https://doi.org/10.4324/9781351252928-15>

### General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

### Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

# Nudges and nodality tools: New developments in old instruments

Colin R. Kuehnhanss

*Vrije Universiteit Brussel, Department of Applied Economics, Pleinlaan 2, 1050 Brussels, Belgium*

---

## Abstract

The (centralised) collection and dissemination of information is a common feature of policy-making, and many policy tools directly originate and benefit from governments' nodal position. It allows detection and information gathering unavailable elsewhere in the social network, and facilitates the spreading of messages to specific individuals, groups, or the public at large. Traditionally, expectations of people's reactions to such policy tools are based on models of rationality and maximisation of self-interest. However, the ongoing popularisation of behavioural insights in policy-making is shifting the focus towards the use of empirically observed behaviour and people's cognitive biases to tailor information to 'nudge' them towards socially desirable choices. This shift is affecting both procedural and substantive policy tool design. This chapter first discusses the concept of nodality and two (recent) instruments based on it: political communication and social marketing. It then considers the increased use of information-based nudges by governments and under what circumstances nudges can be seen as forming a distinct form of policy tool.

*Keywords:* Policy Tools; Nudging; Nodality; Social marketing; Political communication; Policy effectiveness

---

## 1. Introduction

The design of public policy and the choice of policy tools to achieve governments' goals has traditionally been based on a model of human behaviour seeing the individual as rational and self-interested. With the advancement of what are often broadly termed behavioural insights – based on observations of actual human behaviour deviating from the rational ideal, mostly from research in (cognitive) psychology and (behavioural) economics, but also other social sciences – this basis is increasingly being called into question. As alternative behavioural approaches are being advocated, policy designers need to take their value and challenges into account (see Kuehnhanss, forthcoming, for a review).

Currently among the most prominent of these approaches is 'nudging' as proposed by Thaler and Sunstein (2008). Nudging exploits the cognitive biases in people's decision-making to steer them towards 'better' choices. Some nudges try to correct individuals' decisions by debiasing the decision-making process or by counteracting the bias, whereas others actively seek to make use of the existence of predictable biases to steer individuals towards socially desirable choices (see e.g. Lepenies and Malecka, 2015). Proponents of nudging see it as a promising way to achieve policy goals more effectively, at lower costs, or by less coercive means than traditional policy instruments (e.g. Benartzi et al., 2017; Galle, 2014; Guala and Mittone, 2015; Madrian, 2014; Thaler and Sunstein, 2008). While a broad array of criticisms of nudging and its normative basis in Libertarian Paternalism has been voiced, covering ethical, normative, technical, and political concerns (e.g. Glaeser, 2006; Hausman and Welch, 2010; Kuehnhanss, forthcoming; Mols et al., 2015; Mitchell, 2005; Rebonato, 2012; Sugden, 2008, 2009, 2016), the political interest in nudging and the development of government capacity to utilise it are increasing.

As nudging tries to change behaviour without significantly altering incentive structures or imposing costs on the decision-maker, many suggested interventions focus on the type, quantity, and context of the

---

*Email address:* colin.kuehnhanss@vub.be (Colin R. Kuehnhanss)

NB: This is an accepted manuscript of a book chapter published by Routledge in:

Howlett, M & Mukherjee, I (eds.), *Routledge Handbook of Policy Design*, chapter 15, pp.227-242. Abingdon: Routledge.

DOI: 10.4324/9781351252928-15

information governments provide to citizens. They thereby often either compete with or complement other (recent) information-based tools. This chapter discusses nudges in the context of existing taxonomies of such tools. More specifically, it considers the coherence between nudging and other nodality tools building on governments' central position in the social network. Section two first discusses the concept of nodality and how different types of instruments may build upon it. Section three then presents two more recent but increasingly utilised types of nodality-based instruments with different levels of reliance on the traditional assumption of rationality: government communication and social marketing. In section four nudging is discussed in detail and contrasted with the conceptual basis of nodality and the two example instruments from section three to highlight where they overlap and where nudging provides a distinctly novel tool to designers. Section five concludes by stressing that practitioners need to be clear about what defines nudges and their normative provenance in Libertarian Paternalism. While certain nudges constitute their own and novel tools making substantial use of governments' nodality, they are also often built on an understanding of socio-economic phenomena as being the sum of the individual-level behaviours they target. Designers wanting to target wicked problems should probably see nudges as supplementary tools, and not as the magic wand they are sometimes advertised to be.

## 2. Policy design, tools, and nodality

In making public policy, governments have a considerable array of tools and instruments – and freedom in combining them into policy mixes – at their disposal (Howlett, 2005; Wu and Ramesh, 2014). Finding efficient and effective combinations is, however, not necessarily straightforward. The policy design literature provides the meta-analytical basis on which to assess the tool's suitability. As Howlett (2014, p.193) points out:

In a design orientation, policy designs can be thought of as 'ideal types', that is, as ideal configurations of sets of policy elements which can reasonably be expected, if adapted to meet the parameters of a specific contextual setting, to deliver a specific outcome.

The common denominator of available policy tools is the intent to influence collective action to reach specific government goals (Bobrow and Dryzek, 1987; Salamon, 2002; Schneider and Ingram, 1990) through "concrete and specified operational forms of intervention by public authorities" (Bemelmans-Videc et al., 1998, p.4). To effectively create a policy design the designer needs to understand and predict the functioning of the available instruments in achieving the desired goal (Bali et al., forthcoming). Importantly, most designs are not created from scratch, but often need to take into account existing and often gradually evolved (e.g through layering or patching) policy mixes (Howlett, 2014; Thelen, 2004; Van der Heijden, 2011).

One of the most cited approaches to ordering and analysing the basic characteristics of the different items in this 'toolshed' is the NATO classification by Hood (1983); Hood and Margetts (2007). Hood distinguishes between the core resources governments have at their disposal simply based on being governments: nodality, authority, treasure, and organisation. Though it must be stressed that most government tools will inevitably draw on multiple resources, either at the same time or at different stages in the policy cycle, the NATO classification focuses on the most important aspect of a tool to assign it to a resource category. The next three chapters of this book offer in-depth discussions of authority, treasure, and organisation, respectively. This chapter focuses on nodality. As Hood and Margetts (2007, p.6, emphases in original) define it:

*Nodality* gives government the ability to traffic in information on the basis of 'figureheadedness' or of having the 'whole picture' (Simon et al., 1950, p.191). Nodality equips government with a strategic position from which to dispense information, and likewise enables government to draw in information for no other reason than that it is a centre or clearing house. The limiting factor is *credibility*, and the 'coin' – how government spends this resource – is messages sent and received.

Knowledge and capacity tools, for instance, typically draw heavily on nodality and "[...] provide information, training, education, and resources to enable individuals, groups, or agencies to make decisions or carry

out activities.” (Schneider and Ingram, 1990, p.517). Importantly, the underlying assumption in using such instruments has traditionally been the rationality of their targets.

Hood (1983); Hood and Margetts (2007) further distinguish between ‘detectors’ and ‘effectors’. In the context of nodality, detectors comprise incoming streams of information based on the situation of government at the centre of the social network, without the need to pay (significant amounts) for its provision. However, government will still face the opportunity costs for the resources used for receiving information and for sorting signal from noise. Moving from the cheapest and most passive to the most active, possible channels include unsolicited contacts from citizens or businesses driven by their own interests, information as a by-product (for instance in the supply of public or administrative services), actively encouraged citizen-interaction such as feedback mechanisms or ombudsmen, scrutiny of the free press, and direct inquiry such as public opinion or issue-targeted surveys (Hood and Margetts, 2007).<sup>1</sup> Effectors, in contrast, are tools used by governments to manage out-going information. As Hood and Margetts (2007) stress, this may include the suppression of information or the spreading of disinformation. Focusing on the spreading of information to citizens, government may want to target individuals, groups, or the public at large with its messages. For all three levels, messages can be tailored to require an initial trigger to be received, be public but require knowledge of how to receive them, be broadly available, or be actively aimed and communicated at the target group or individual.

The aim of the collection and dissemination of information by government ultimately remains to know about and be able to influence the behaviour of its agents and citizens towards its policy goals. To this end, Howlett (2000, 2009) identifies two broad categories of instruments as being at its disposal. First, it can use *substantive* instruments to try to alter the behaviour of citizens, either by directly addressing them or by indirectly influencing their environment (e.g. the availability or characteristics of goods and services). The target of substantive instruments are thus the behaviours of “those involved in the production, consumption and distribution of different kinds of goods and services in society” (Howlett, 2009, p.25).

Second, it can try to shape its own institutions’ and actors’ interactions with the social network in a way that facilitates the achievement of its goals through *procedural* instruments. Governmental policy actors and their relationships to each other and to non-governmental actors can form complex interaction patterns, including institutional and informal interactions. Within policy networks, such interactions are usually “structured around shared beliefs and interest in public policy making and implementation” (Howlett, 2009, p.26). By influencing these beliefs and interests through procedural tools, governments can attempt to alter policy-makers’ preferences, and therefore policy and, ultimately, the environment in which citizens make their decisions.

Taking the above understanding of nodality as a government resource and the separation of instruments into categories of substantive and procedural as a basis, this chapter explores some of the dominant and ongoing trends in the collection and use of information by governments with the aim to influence citizens’ behaviour.

### 3. Recent additions to the nodality toolshed

Some recent additions to nodality-based tools, at least in the increased frequency of use, are government communication and social marketing.

#### 3.1. Government communication

The term government communication has been used to describe a broad variety of government activities with different levels of focus, ranging from a global inclusion of political information to specific activities like advertising (see e.g. Bang, 2003; Young, 2007). Howlett (2009, p.24), for instance, provides the following definition for it as a policy tool:

---

<sup>1</sup>Note that surveys like censuses or tax returns would not fall in this category. Because citizens are obliged to respond to them and failure to (correctly) do so is penalised, they squarely fall in the authority category of policy tools.

[...] ‘government communication’ can be thought of as a generic name for a wide variety of a specific type or category of governing instruments, ones which typically draw upon what Christopher Hood (1986) called ‘nodality’ or the use of government informational resources to influence and direct policy actions through the provision or withholding of ‘information’ or ‘knowledge’ from societal actors.

In itself, this definition leaves it ambiguous which specific activities would qualify, and on what grounds, as a government communication tool and which would not. In distinguishing between substantive and procedural tools, it becomes somewhat clearer. Howlett (2009) identifies two types of instruments within each category. The assumption is that these tools are not only aimed at different audiences – producers or political actors on the one side, consumers or citizens on the other side – but also at different stages in the policy and production cycles. For substantive instruments, the types are product information tools targeting producers and consumer information tools aimed at citizens. In the procedural instruments category, they are general disclosure tools at the front end and data collection and release tools at the back end.

Leaving aside the decision-making stage in the policy cycle as less likely to be influenced by communication tools, procedural tools are aimed at agenda setting and policy formulation. They comprise examples such as audits, freedom of information acts, whistleblower protection legislation, and official secrets acts or censorship to influence the way policy actors manage the flow of information between themselves and vis-à-vis the public. Collection and release tools, in contrast, focus on the policy implementation and evaluation stages. Howlett (2009), based on the work by Stanbury and Fulton (1984), lists public hearings, planned leaks, media relations and communication strategies, but also items such as inquiries, surveys and polling in this category. In terms of policy evaluation, benchmarking and performance indicators also belong here (Julnes and Holzer, 2001; Kouzmin et al., 1999; Van Thiel and Leeuw, 2002).

To distinguish the substantive communication tools it is more intuitive to make use of the production process for goods and services that these tools seek to influence, rather than the policy cycle. The split made by Howlett (2009) differentiates between tools aimed at producers and tools directly targeting citizens (or rather consumers in the production cycle). The producer-directed tools comprise notifications and approaches like ‘moral suasion’. The former require producers to notify consumers of certain attributes of their products and are described by Adler and Pittle (1984, as cited in Howlett (2009, p.28)) to:

[...] convey factual information to the intelligent target. Implicit in the notification approach is the belief that the target, once apprised of the facts, will make the appropriate decision.

Examples of such notification tools include food labels (e.g. Baltas, 2001; Capacci et al., 2012; Padberg, 1992), warnings on tobacco products (e.g. Fong et al., 2009; Levy et al., 2004), or mileage and pollution information for cars. With the classic understanding of citizens’ decision-making as rational, such information can be seen as overcoming information asymmetries. The required measures for the provision of information are grounded in regulation, and therefore imply mandatory disclosure of the intervention to the public (Baksi and Bose, 2007; Jahn et al., 2005). Moral suasion may similarly be seen as providing information to the rational decision-maker, if only as conveying the wishes of government as basis for voluntary action by producers. However, such appeals may also carry the threat of coercion if no action is taken (see Howlett, 2009). Both the expected way of influencing behaviour and the publicity of the intervention are important aspects of these instruments.

Instead of going through producers, governments can also directly address citizens. This may happen in broad appeals to different social actors to adopt certain behaviours or act according to specific principles or norms. In particular the role of social norms has received much attention in the behavioural insights literature, and will be further discussed below. For the classic tools the expectation in invoking principles and norms is for governments to exert leadership in defining what exactly it is that ought to be followed. Governments may also try to directly ‘persuade’ citizens to modify their behaviour by sending messages through, for instance, mass media channels. The information content of such messages can differ wildly, ranging from highly emotional appeals (e.g. anti drink-driving messages) to targeted information campaigns. As Howlett (2009) observes, many national governments spend heavily on mass media communications and advertising, often being the largest purchaser of advertisement time and space. However, the purchasing of

advertising slots does not in itself imply an adoption of commercial marketing techniques, but can also just be used for appeals and information campaigns.

### *3.2. Social marketing*

Contrary to political communication, social marketing necessarily makes use of the commercial marketing tool-kit. Its inclusion in this chapter as a policy tool may seem at odds with its origins and with an understanding by social marketers that governments are only one of many potential stakeholders – next to public services, non-profit organisations and associations, interest groups, and also for-profit organisations (see Andreasen, 2002; Dibb, 2014). However, in many respects, social marketing offers a methodology for policy-makers to enact behaviour change among citizens and is indeed being used by governments for various purposes (Altman and Petkus, 1994; Mols et al., 2015). Much like political communication, it draws on other government resources than nodality, notably organisation and treasure. Nonetheless, governments' position at the centre of social networks provides an ideal basis for commissioning social marketing activities.

Originating from the work of Kotler and Levy (1969) seeking to extend commercial marketing methods to social issues, social marketing has become a field of active academic and practical interest over the past 40 years (Andreasen, 2002; Dibb, 2014). Examples of its use include discouraging alcohol consumption in public places, encouraging breastfeeding by new mothers and healthy eating programmes in the health sector, household budget and debt management campaigns, and recycling and car sharing campaigns in the environmental sector. Social marketing may, however, also work by targeting legislators (Donovan, 2011), as for example in campaigning for smoking bans or food labelling regulation (Dibb, 2014). While multiple definitions exist, the two core components are typically a reliance on commercial marketing methods and the aim to work towards a social good (Andreasen, 1994, 2002; Crawshaw, 2013; French and Russell-Bennett, 2015; Lefebvre, 2012). An exemplary definition is the one adopted by the European (ESMA), Australian (AASM), and international (iSMA) social marketing associations (Saunders et al., 2015, p.142):

Social Marketing seeks to develop and integrate marketing concepts with other approaches to influence behaviours that benefit individuals and communities for the greater social good. Social Marketing practice is guided by ethical principles. It seeks to integrate research, best practice, theory, audience and partnership insight, to inform the delivery of competition sensitive and segmented social change programmes that are effective, efficient, equitable and sustainable.

In doing so, the target is the behaviour of the individual, rather than group or community behaviours (Andreasen, 1994, 2002). Consequently, the application of social marketing requires not only the application of some tool of behaviour change, but also an understanding of what determines individual behaviour in the first place, and how it relates not only to individual welfare but to the social good. To clarify what constitutes a social marketing intervention, Figure 1 presents current benchmarks by the British National Social Marketing Centre used in the field. Three aspects of these benchmarks are particularly noteworthy: i) the empirical approach to testing and evaluating interventions against measurable objectives, ii) the reliance on behavioural theories and social context in developing interventions, and iii) the voluntary engagement of targets with the intervention in an exchange setting supported by the marketing mix.

In terms of the procedural versus substantive policy tool taxonomy, aspects i) and ii) can be regarded as the responsibility of policy-makers and their agents to coordinate the policy goal and their understanding of expected target behaviour. The need for having measurable objectives and testing the effect of interventions makes procedural tools such as education of staff, focus groups, and surveys (Howlett, 2005) more important. For the substantive side, the focus on individual behaviour with a reliance on behavioural theories offers (at least to a certain extent) a break from the traditional reliance on an assumption of rationality of policy targets. While the marketing mix (promotion, product, price, place) draws on classic incentives as well, marketing has for a long time recognised the value of non-monetary and psychological factors in promoting brands. Social marketers can equally rely on such approaches and integrate new trends in behaviour change rather quickly, as, for example, shown by the uptake of using existing social norms to 'market' certain behaviours (Berkowitz, 2004; Burchell et al., 2013; Haines, 1996). However, some authors argue that social marketing's focus on changing individuals' behaviour sparked by the works of Andreasen (1994,

1. **Behaviour change:** Intervention seeks to change behaviour and has specific measurable behavioural objectives.
2. **Audience research/insight:** Formative research is conducted to identify target consumer characteristics and needs. Intervention elements are pretested with the target group.
3. **Segmentation:** Different segmentation variables are applied so that the strategy is tailored to the target segment.
4. **Exchange:** Consideration is given to what will motivate people to engage voluntarily with the intervention and what benefit (tangible or intangible) will be offered in return.
5. **Marketing mix:** Intervention consists of promotion (communications) plus at least one other marketing 'P' ('product', 'price', 'place'). Other Ps might include 'policy change' or 'people'.
6. **Competition:** Intervention considers the appeal of competing behaviours (including current behaviour). The developed intervention strategies seek to minimise the competition.
7. **Theory:** Using behavioural theories to understand human behaviour and to inform the programmes which are developed.
8. **Customer orientation:** Attaching importance to understanding the customer, their attitudes and beliefs, knowledge and the social context in which they are placed.

**Figure 1:** National Social Marketing Centre benchmarks for social marketing. National Social Marketing Council (2014); Bird (2010)

Source: Dibb (2014, p.1166)

2002) has led to an over-reliance on behaviour change management and a dynamic of behaviour change for the sake of change, rather than for the social good (e.g. Lefebvre, 2012; Saunders et al., 2015; Spotswood et al., 2012). In this context, the third aspect of the voluntary nature of engagement of the target with the intervention is particularly relevant. Already the benchmark point on competition hints at an intent of reducing the options available to targets, though it remains silent on the nature of such restrictions. Whether the use of commercial marketing tools can ever lead to only voluntary behaviour change is another disputed question – as is whether this should be the intent of social marketing. As Donovan (2011, p.11) puts it: “In short, it is a marketer’s dream for their product to be the only brand available; delete ‘voluntary’ from the definition of marketing and hence of social marketing.” Even if voluntary engagement is maintained as an ideal, the increasing behavioural insights literature precisely argues that behaviour change strategies are likely to create non-intended psychological responses outside the control of individuals (Saunders et al., 2015).

For policy designers, social marketing may provide a useful tool in so far as it is clear about the intention to change behaviour according to a predefined (and measurable) goal. It’s ambition to do so in an ‘effective, efficient, equitable and sustainable’ manner would make it even more appreciable. It is, however, also clear in its ambition to first and foremost rely on commercial marketing techniques, but not always as unequivocally clear on what determines the social good to be reached. It leaves open the question of who defines the social good, on what grounds, and how to deal with diverging views of whether a certain outcome is indeed a social good. In search for an answer to such questions, Spotswood et al. (2012), for instance, suggest the UN Declaration of Human Rights as a value basis for ethical social marketing. If used as a policy tool, government’s legitimacy would need to provide this ethical basis. In any decision on behaviours that create externalities on others in the society, governments usually not only need to evaluate economic but also normative criteria. Social marketing has yet to come to a conclusion on the relationship between individual freedoms and the social good (whatever it may be). As marketing does not necessarily enjoy a spotless reputation among many people, such tensions could easily lead to accusations of manipulation by government.

#### 4. Nudging

The concept of Libertarian Paternalism and the related form of intervention termed ‘nudging’ that were wildly popularised by Thaler and Sunstein (2008) in their best-seller *Nudge*, promise to resolve this discrepancy between individual freedom and (social) welfare. Unfortunately, much confusion has ensued about the definition of nudges and the normative basis Thaler and Sunstein (2008) use to justify their usage. It is thus necessary to first take a step back and clarify what the remainder of this chapter will understand by the term.

Policy studies – along with the economics and political science mainstreams – have traditionally relied on an understanding of human behaviour as rational and self-interest maximizing. Models building on this understanding, like Expected Utility Theory (Von Neumann and Morgenstern, 1947), take people’s goals and their environment as (largely) given and rely on a set of axiomatised rules of choice to fill the void between them and the relevant decisions (Jones, 1999). Such substantive rationality approaches have the advantage of providing a constrained set of defined rules to describe and predict human behaviour. However, the descriptive accuracy of such models has been questioned, as discrepancies between predicted and empirically observed behaviour became apparent (Simon, 1955, 1957). Over the last four decades, much research has been conducted on when and how people’s decisions deviate from the rational ideal. Important initial findings provided by the heuristics and biases paradigm rooted in cognitive psychology (Tversky and Kahneman, 1974; Kahneman and Tversky, 2000) were integrated into behavioural economics and increasingly also parts of political science. One of the key contributions of this stream of research is the realisation that people rely on mental shortcuts in their decision-making and that, while in themselves useful and powerful, such heuristics may be prone to bias. Similarly, people suffer from constraints in their ability to process information and have limited willpower. Importantly, decisions may in practice also depend on aspects of the environment that should have no influence under rational choice. By now, a large array of predictable cognitive biases in human decision-making has been well-documented (Camerer et al., 2004; Kahneman and Tversky, 2000). Recently, the term behavioural insights has been gaining traction to describe the combination of findings from diverse fields such as (behavioural) economics, (cognitive) psychology, neuroscience and others to provide empirically based descriptions of human behaviour. A detailed discussion of the differences in the evolution and meaning of the terms behavioural economics and behavioural insights is beyond the scope of this chapter – but see Kuehnhanss (forthcoming) for a review – and I shall use the term behavioural insights as a shorthand for approaches seeking to provide descriptively more accurate accounts of human behaviour than classic rational choice theories.

With behavioural insights gaining importance in economic and political analysis, they simultaneously pose an opportunity and a challenge for policy-makers. Thaler and Sunstein (2003, 2008) propose to use behavioural insights to improve people’s decision outcomes. As policy-making is inevitably dependent on normative considerations of human autonomy and the social good (i.e. social welfare), it calls for a balance between individual freedoms and state paternalism. In the context of this debate, Thaler and Sunstein (2003, 2008) suggest Libertarian Paternalism as a ‘third way’. They contend that the existence of, as they see them, predictable ‘errors’ (relative to rational choice) in human decision-making justifies “[...] self-conscious efforts, by institutions in the private sector and also by government, to steer people’s choices in directions that will improve their lives” (Thaler and Sunstein, 2008, p.5), as long as they do not constrain freedom of choice and “make choosers better off, as judged by themselves” (Thaler and Sunstein, 2008, p.5).<sup>2</sup>

Libertarian Paternalism has been widely criticized on ethical, normative, technical, and political grounds, among other (e.g. Amir and Lobel, 2008; Baldwin, 2014; Gigerenzer, 2015; Glaeser, 2006; Hausman and Welch, 2010; Kuehnhanss, forthcoming; Mitchell, 2005; Rebonato, 2012; Sugden, 2008, 2009, 2016), but still serves as the basis from which the use of nudges is derived. Specifically, Thaler and Sunstein (2003, 2008), argue that the environment in which people make decisions is never neutral. No matter the decision at hand, the behavioural influences it enacts on the decision-maker constitute a choice architecture which may always impact the outcome. Whoever is then in the position to alter the environment becomes a choice architect. In the case of public policy, it is the policy-maker (politicians, civil servants, experts) who should take the choice architecture into account to help people reach ‘better’ decisions. Unfortunately, this approach (and a problematic definition of ‘better off’ in terms of individual and social outcomes) leaves many questions of legitimacy, responsibility, and transparency unanswered. This debate is important (see, for instance, Kuehnhanss, forthcoming; Rebonato, 2012), but also goes beyond the scope of this chapter. In what follows, I will discuss nudging as far as possible in isolation from the normative debate. Note, however, despite the efforts of some authors to clarify the concept of nudging independently of Libertarian Paternalism (Hansen,

---

<sup>2</sup>Note that in an earlier paper, Thaler and Sunstein (2003) still propose “[...] ‘better off’ to be measured as objectively as possible” without equating revealed preferences with welfare. See Sugden (2016) for a discussion of the meaning and relevance of the phrase ‘as judged by themselves’.

2016; Hausman and Welch, 2010), the concepts remain intertwined in their understanding that cognitive biases in individual choice invite action by a social planner. They also often built on an understanding of socio-economic phenomena being the sum of the individual-level behaviours they seek to target.

#### 4.1. *What is nudging?*

When assessing the potential relevance of nudging to policy designers, different definitions may lead to diverging conclusions. In their book, Thaler and Sunstein (2008, p.6) introduce the concept like this:

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.

Thus they provide essentially two negative conditions: anything that does not limit choice (either by mandate or incentive) and is not too difficult to avoid is a nudge. Thaler and Sunstein (2008) proceed to present a wide range of examples of what may be seen as a nudge: default rules such as automatically becoming an organ donor when getting a driver license unless actively opting out, or becoming enrolled in a default company savings plan; social norm messages like comparisons of home-owners' energy consumption with their neighbours reinforced by smiley faces on the bill, or reminding people of a social group they may identify with to illicit a sense of responsibility for their environment (e.g. the 'Don't Mess with Texas' campaign); provision of information in accessible forms such as health warnings on cigarettes, calorie and content labels on food, or compulsory mileage and fuel cost information for cars. More extravagant examples also include the famous fly-in-the-urinal at Amsterdam airport which is meant to increase levels of focus, and an alarm clock which 'runs away' and hides when the snooze button is pressed to help with issues of limited willpower.

Obviously this is a rather bewildering array of interventions posing a problem to policy designers seeking effective 'ideal types' of policy elements that can reasonably be expected to deliver specific outcomes (see Howlett, 2014, p.193). Some authors have attempted to come to more concise definitions grounded in the same behavioural principles Thaler and Sunstein (2008) rely on. For instance, Hausman and Welch (2010) observe that the definition by Thaler and Sunstein (2008) would also classify a 10,000 volt electric shock as a nudge as long as the nudgee (or in this case rather the victim) can easily enough walk away from it. They also argue that Thaler and Sunstein (2008) mistakenly count the provision of information and rational persuasion (e.g. warning labels and educational campaigns) as paternalistic in the sense of being warranted by behavioural flaws. However, nothing in the provision of information as such inherently distinguishes between rational decision-makers and those subject to cognitive biases. Hausman and Welch (2010, p.126) thus also introduce non-economic incentives and a positive requirement to build on behavioural deviations from rational choice into their definition of nudging:

Nudges are ways of influencing choice without limiting the choice set or making alternatives appreciably more costly in terms of time, trouble, social sanctions, and so forth. They are called for because of flaws in individual decision-making, and they work by making use of those flaws.

Going several steps further, Hansen (2016) provides a rigorous definition trying to align the concept of nudging with the broader behavioural insights principles. In the interest of brevity, I refer the interested reader to his paper for the exact derivation of the definition. Highly relevant to the design perspective is the distinction Hansen (2016) and Hansen and Jespersen (2013) make between 'nudge' as a verb and as a noun. As they point out, the term is often used interchangeably as both. In the original definition of Thaler and Sunstein (2008), a nudge is any aspect of the choice architecture that influences behaviour, regardless of whether it just happens to be there or has wilfully been altered. Hansen and Jespersen (2013) advocate the use of the word 'nudge' as a verb to highlight the intentionality driving nudging interventions and to clarify the agency that the nudger has towards the nudgee. The definition Hansen (2016, p.174) arrives at is:

A nudge is a function of (I) any attempt at influencing people's judgement, choice or behaviour in a predictable way, that is (1) made possible because of cognitive boundaries, biases, routines, and

habits in individual and social decision-making posing barriers for people to perform rationally in their own self-declared interests, and which (2) works by making use of those boundaries, biases, routines, and habits as integral parts of such attempts. Thus a nudge amongst other things works independently of:

- (i) forbidding or adding any rational relevant choice options,
- (ii) changing incentives, whether regarded in terms of time, trouble, social sanctions, economic and so forth, or
- (iii) the provision of factual information or rational argumentation.

It is in these points that designers should be aware of the assumptions underlying nudging diverging from those of government communication and social marketing. Government communication presumes the rationality of the recipient of the message, be it firms responding to the signals they receive or citizens acting upon appeals and campaigns. It also not only seeks to address individuals to alter their behaviour, but may also appeal to larger groups or the nation as a whole. Particularly in relation to social norms, government communications are typically meant to exert leadership in defining the appropriate norm to follow. As the examples above already indicate, social norm nudging typically builds on already prevailing norms to reinforce behaviour that is in accordance with them (Glaeser, 2006). Social marketing partially relaxes the rationality assumption, but fully relies on economic and other incentives in ‘selling’ the wanted behaviour change. While it seeks to promote the social good, it lacks a clear conceptual basis for defining what constitutes it and who defines it (Spotswood et al., 2012). Libertarian Paternalism provides an empirically grounded motivation for its policy interventions and based on it argues for the active role taken by the social planner. Whether the empirical basis actually warrants the broad mandate Libertarian Paternalism claims is doubtful (see Kuehnhanss, forthcoming), but in seeking welfare improvements based on factors endogenous to individual behaviour it is less arbitrary than the suggested use of the UN Declaration of Human Rights to guide social marketing.

#### *4.2. Nudging and nodality*

Throughout the debate on what constitutes nudging, it has remained clear that nudging is not restricted to government action. While the basis of Libertarian Paternalism strongly suggests governments to be suitable social planners, Thaler and Sunstein (2008) stress throughout their definitions and examples that also other organisations and firms may utilize nudges on their own initiative. Of course, nudging remains available to governments as a potential tool. The extent to which it relies on nodality thereby depends on the specific intervention, even under the restrictive definition by Hansen (2016). However, some general observations can be made.

While initially brought forward and directly advocated by social scientists, the nudge approach has sparked active interest by governments. Starting in the UK and the US, by now the use of ‘nudge-type policies’ has been observed in at least 135 countries, 51 of which have “central state-led policy initiatives that have been influenced by the new behavioural sciences.” (Whitehead et al., 2014, p.9). In the process, the relevant government detectors have shifted from a passive observation of trends in (social) science to an active engagement with the research agenda and the investment in dedicated policy-labs and research units. The best known examples are the British Behavioural Insights Team (also referred to as the ‘Nudge Unit’) initially set up by David Cameron’s coalition government within the Cabinet Office,<sup>3</sup> and the US Social and Behavioral Sciences Team (SBST) supported by Obama’s Executive Office.<sup>4</sup> Similar units have been introduced in Australia, Canada, Denmark, France, Germany, Saudi Arabia, and Singapore (Lunn, 2014). With the integration of such units into government – along with governments’ oversight and funding – varying from fully private to fully governmental across countries (McGann et al., forthcoming), nudging

---

<sup>3</sup>Already the previous New Labour government had developed an interest in behavioural insights and nudging. For a discussion of the evolution of nudging in the UK see Jones et al. (2014).

<sup>4</sup>At the time of writing, the services of the SBST have been suspended under the Trump administration and its future is unclear.

relevant detectors have arguably shifted from a reliance on nodality to increasingly drawing on treasure and organisation.

For effectors, the differentiation between substantive and procedural instruments is again useful. The latter are in this context perfectly exemplified by Obama's (2015) Executive Order 13707 directing all US agencies to apply behavioural insights to the design of their policies. In addition, both in the US and in other countries, governments and public administrations are increasingly hiring behavioural economists and other staff with relevant education and experience. The European Commission, for instance, has offered a summer school for its staff and issued guidelines on how to apply behavioural insights (Van Bavel et al., 2013).

As effectors, nudges are often advertised as being a simple and cheap solution even to wicked problems. The broad definition used by Thaler and Sunstein (2008) may invite such a conclusion. However it also encompasses most information-based policy instruments. Appeals typically used in government communication or social marketing campaigns covering anything from food labels to breastfeeding among new mothers to energy consumption information would be counted as nudges, in as far as they do not change economic incentives. As in the case of food labelling, the difference between a nodality tool like government communication or social marketing and nudging lies in the assumptions about the rationality of the targeted individual and whether behavioural insights are actively used.

When using the definition by Hansen (2016), the potential universe of nudges narrows. For example, one celebrated nudge has been the use of personalised text-messages to remind people to pay fines (Haynes et al., 2012), which is claimed to increase the salience of the debt due. However, while benefiting from the nodality of government in identifying debtors, the use of a reminder addressing the debtor by name does more than exploit a bias: it is a clear show of authority, transmission of factual information (it informs the debtor that the state is actively tracking the fine), and (though not explicit) also a threat of sanction in case of non-compliance.

Examples of nudging interventions which fulfil the explicit criteria of Hansen's (2016) definition and largely rely on nodality in their use by governments include two very prominent types: default rules and framing. A common example of the effect of a default rule is the structure of the forms drivers need to complete when they collect their licences. In some countries, the form contains a question asking people to opt in to become an organ donor in case of death. The default thus is not to become a donor. In other countries, the default is to become a donor, and those objecting need to tick a box to opt out. The effect of such small changes can be drastic, as demonstrated by the findings of Johnson and Goldstein (2003). For instance, Germany and Austria are arguably quite similar in terms of norms and culture. But while only 12 percent of Germans are signed up as organ donors, almost 100 percent of Austrians are. The most important factor in explaining this difference seems to be the default rule. In this case, the reliance on nodality is obvious, as the administrative tasks required for the issuance of driver's licenses need to be carried out in either case. By simply adjusting the phrasing of the information provided to drivers, governments can change their behaviour drastically. Yet, it is important to note that not all default rules will satisfy the nudging definition by Hansen (2016). In more complex decision problems, such as automatic enrolment for savings plans, it is not always clear whether defaults work by making use of cognitive boundaries, routines, or habits or are (falsely) understood to convey factual information in the form of a recommendation by an authoritative source. Important to effective policy design is also the finding that people are sensitive to the outcome of defaults. They are more likely to continue following defaults if they were previously exposed to good defaults (de Haan and Linde, 2016).

Framing effects describe instances when the way of presenting (otherwise equivalent) information alters choice behaviour. In other words, they violate the invariance axiom of rational choice theory. A common domain in which framing effects occur is risky choice. Imagine your doctor tells you either that five years after a particular type of surgery, 90% of patients are alive, or that five years on 10% of patients are dead. How likely would you be to opt for the surgery under each frame? Multiple studies have found people to respond substantially more favourably to surgery in the survival frame than in the death frame (see Moxey et al., 2003, for a review). Similar effects can be observed in other domains such as financial decisions, health (25% fat vs. 75% lean food), or in economic policy decisions (Kuehnhanss et al., 2015). They are thus particularly relevant when governments need to provide information about any issues carrying risks as

the formulation may invite preference reversals dependent on the formulation. With the distinction Hansen and Jespersen (2013) make between nudge as a verb and a noun, framing would count as a nudge if its use is intentional. If information is provided without any intent to evoke a behavioural response, it would, under the definition of Thaler and Sunstein (2008), still be a change to the choice architecture, but it is doubtful whether it should be counted as a behavioural policy intervention.

## 5. Conclusion

The use of behavioural insights in policy-making is bound to increase. Nudging in particular has been receiving tremendous attention. As the definition under which nudging was popularised is not particularly concise, the term has come to be applied to almost anything that changes behaviour. If nudging is to become a reliable tool for policy design, it is therefore increasingly important to be clear about what should be understood by the term, what empirical and normative bases it builds on, and how it fits in with other policy instruments. The aspects encapsulated in Hansen's (2016) definition discussed in this chapter provide a concise and rigorous checklist for practitioners to evaluate whether a planned intervention can indeed be seen as a nudge. With more conceptual clarity designers will also find it easier to determine whether older tools like government communication and social marketing or the newer nudging approach are better suited to target a specific problem.

For what Hood (1983) calls detectors, the reliance of nudging on nodality seems to be reducing with the increasing establishment of dedicated policy labs, nudge units, and in-house capacity building. Arguably, resources like treasure and organisation are becoming more important in buying expertise or running in-house trials on potential nudge interventions. For effectors, in contrast, nodality remains highly valuable. It allows governments to identify potential problem areas where nudges can supplement existing instruments, to find the right target groups and methods of sending relevant messages, and to observe the outcome in the long term.

As nudging came about along with Libertarian Paternalism, it is warranted to either separate nudging interventions from their normative heritage, or to be cognisant about the implicit assumptions and ideological implications. If taken as a stand-alone instrument to target (wicked) policy problems, nudging relies on an understanding of individual responsibility for outcomes that are hampered by cognitive biases. By counteracting the biases or having a social planner exploit them for the social good, it sees the behavioural barriers to socio-economic problems removed. As argued by Crawshaw (2013) for behavioural interventions more broadly, such an approach is prone to underestimating the significance of social and relational factors in the occurrence of wicked problems. Similarly, the Science and Technology Select Committee (2011) has criticized the UK government for overly relying on novel behavioural interventions and neglecting other traditional policy instruments. With the important exception of the work by Galle (2014), studies directly comparing the efficiency of nudges and classic instruments seem absent.

When defined more narrowly, the universe of potential nudges is reduced but, their distinct use for policy designers becomes clearer. Given that many nudges exploit the way information is presented, they can constitute a supplementary tool to existing instruments. The SBST, for example, specifically targeted existing but under-performing policies to increase their effectiveness through the use of behavioural insights and nudges such as defaults and framing. In most instances, nudging will likely be more useful and influential if used in policy layering or patching, rather than in an attempt to create entirely new policy interventions.

## Acknowledgements

I wish to thank the Research Foundation Flanders (FWO) for financial support in the form of a PhD-Fellowship (grant nr. 11V2117N).

## References

- Adler, R.S., Pittle, R.D., 1984. Cajolery or command: Are education campaigns an adequate substitute for regulation. *Yale Journal on Regulation* 1(2), 159–193.
- Altman, J.A., Petkus, E., 1994. Toward a stakeholder-based policy process: An application of the social marketing perspective to environmental policy development. *Policy Sciences* 27(1), 37–51. DOI: 10.1007/BF00999598.
- Amir, O., Lobel, O., 2008. Stumble, predict, nudge: How behavioral economics informs law and policy. *Columbia Law Review* 108(8), 2098–2138.
- Andreasen, A.R., 1994. Social marketing: Its definition and domain. *Journal of Public Policy & Marketing* 13(1), 108–114. DOI: 10.1108/20426761111141850.
- Andreasen, A.R., 2002. Marketing social marketing in the social change marketplace. *Journal of Public Policy & Marketing* 21(1), 3–13. DOI: 10.1509/jppm.21.1.3.17602.
- Baksi, S., Bose, P., 2007. Credence goods, efficient labelling policies, and regulatory enforcement. *Environmental and Resource Economics* 37(2), 411–430.
- Baldwin, R., 2014. From regulation to behaviour change: Giving nudge the third degree. *The Modern Law Review* 77(6), 831–857. DOI: 10.1007/BF02763247.
- Bali, A., Capano, G., Howlett, M., Ramesh, M., forthcoming. Designing for policy effectiveness. *Policy and Society* .
- Baltas, G., 2001. Nutrition labelling: Issues and policies. *European Journal of Marketing* 35(5/6), 708–721. DOI: 10.1108/03090560110388178.
- Bang, H.P., 2003. *Governance as Social and Political Communication*. Manchester University Press, Manchester.
- Bemelmans-Videc, M.L., Rist, R.C., Vedung, E.O., 1998. *Carrots, Sticks, and Sermons: Policy Instruments and Their Evaluation*. 5 ed, Transaction Publishers, New Brunswick.
- Benartzi, S., Beshears, J., Milkman, K.L., Sunstein, C.R., Thaler, R.H., Shankar, M., Tucker-Ray, W., Congdon, W.J., Galing, S., 2017. Should governments invest more in nudging? *Psychological Science in press*. DOI: 10.1177/0956797617702501.
- Berkowitz, A.D., 2004. *The social norms approach: Theory, research, and annotated bibliography*. Technical Report. Higher Education Center for Alcohol and Other Drug Abuse and Violence Prevention, US Department of Education, Washington, DC. URL: [http://www.alanberkowitz.com/articles/social\\_norms.pdf](http://www.alanberkowitz.com/articles/social_norms.pdf).
- Bird, S., 2010. Benchmark criteria for social marketing, in: *Spotlight on Social Marketing #2*. Bristol Social Marketing Centre. URL: <http://www.thensmc.com/sites/default/files/benchmark-criteria-090910.pdf>.
- Bobrow, D.B., Dryzek, J.S., 1987. *Policy Analysis by Design*. University of Pittsburgh Press, Pittsburgh, PA.
- Burchell, K., Rettie, R., Patel, K., 2013. Marketing social norms: Social marketing and the social norm approach. *Journal of Consumer Behaviour* 12(1), 1–9. DOI: 10.1002/cb.1395.
- Camerer, C.F., Loewenstein, G., Rabin, M. (Eds.), 2004. *Advances in Behavioral Economics*. Princeton University Press, Princeton, New Jersey.
- Capacci, S., Mazzocchi, M., Shankar, B., Brambila Macias, J., Verbeke, W., Pérez-Cueto, F.J., Koziol-Kozakowska, A., Piórecka, B., Niedzwiedzka, B., D’addesa, D., et al., 2012. Policies to promote healthy eating in Europe: A structured review of policies and their effectiveness. *Nutrition Reviews* 70(3), 188–200. DOI: 10.1111/j.1753-4887.2011.00442.x.
- Crawshaw, P., 2013. Public health policy and the behavioural turn: The case of social marketing. *Critical Social Policy* 33(4), 616–637. DOI: 10.1177/0261018313483489.
- Dibb, S., 2014. Up, up and away: Social marketing breaks free. *Journal of Marketing Management* 30(11-12), 1159–1185. DOI: 10.1080/0267257X.2014.943264.
- Donovan, R., 2011. Social marketing’s mythunderstandings. *Journal of Social Marketing* 1(1), 8–16. DOI: 10.1108/204267611111104392.
- Fong, G.T., Hammond, D., Hitchman, S.C., 2009. The impact of pictures on the effectiveness of tobacco warnings. *Bulletin of the World Health Organization* 87(8), 640–643. DOI: 10.1590/S0042-96862009000800026.
- French, J., Russell-Bennett, R., 2015. A hierarchical model of social marketing. *Journal of Social Marketing* 5(2), 139–159. DOI: 10.1108/JSOCM-06-2014-0042.
- Galle, B., 2014. Tax, command ... or nudge?: Evaluating the new regulation. *Texas Law Review* 92(4), 937–994. URL: <http://www.texaslrev.com/wp-content/uploads/2015/08/Galle-92-4.pdf>.
- Gigerenzer, G., 2015. On the supposed evidence for libertarian paternalism. *Review of Philosophy and Psychology* 6(3), 361–383. DOI: 10.1007/s13164-015-0248-1.
- Glaeser, E.L., 2006. Paternalism and psychology. *The University of Chicago Law Review* 73(1), 133–156. DOI: 10.2139/ssrn.860865.
- Guala, F., Mittone, L., 2015. A political justification of nudging. *Review of Philosophy and Psychology* 6(3), 385–395. DOI: 10.1007/s13164-015-0241-8.
- de Haan, T., Linde, J., 2016. ‘Good nudge lullaby’: Choice architecture and default bias reinforcement. *The Economic Journal* 128(610), 1180–1206. DOI: 10.1111/eoj.12440.
- Haines, M.P., 1996. *A social norms approach to preventing binge drinking at colleges and universities*. Technical Report. Higher Education Centre for Alcohol and Other Drug Prevention, Newton, MA. URL: <http://files.eric.ed.gov/fulltext/ED421930.pdf>.
- Hansen, P.G., 2016. The definition of nudge and libertarian paternalism: Does the hand fit the glove? *European Journal of Risk Regulation* 7(1), 155–174. DOI: 10.1017/S1867299X00005468.
- Hansen, P.G., Jespersen, A.M., 2013. Nudge and the manipulation of choice: A framework for the responsible use of the nudge approach to behaviour change in public policy. *European Journal of Risk Regulation* 4(1), 3–28. DOI: 10.1017/S1867299X00002762.

- Hausman, D.M., Welch, B., 2010. Debate: To nudge or not to nudge. *Journal of Political Philosophy* 18(1), 123–136. DOI: 10.1111/j.1467-9760.2009.00351.x.
- Haynes, L., Service, O., Goldacre, B., Torgerson, D., 2012. Test, learn, adapt: Developing public policy with randomised controlled trials. Technical Report. Behavioural Insights Team. London. URL: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/62529/TLA-1906126.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/62529/TLA-1906126.pdf).
- Van der Heijden, J., 2011. Institutional layering: A review of the use of the concept. *Politics* 31(1), 9–18. DOI: 10.1111/j.1467-9256.2010.01397.x.
- Hood, C.C., 1983. *The Tools of Government*. Macmillan, London.
- Hood, C.C., Margetts, H.Z., 2007. *The Tools of Government in the Digital Age*. Palgrave Macmillan, Houndmills.
- Howlett, M., 2000. Managing the “hollow state”: Procedural policy instruments and modern governance. *Canadian Public Administration/ Administration Publique du Canada* 43(4), 412–431. DOI: 10.1111/j.1754-7121.2000.tb01152.x.
- Howlett, M., 2005. What is a policy instrument? Tools, mixes, and implementation styles, in: Eliadis, P., Hill, M.M., Howlett, M. (Eds.), *Designing Government: From Instruments to Governance*. McGill-Queen’s University Press, Montreal. Chapter 2, pp. 31–50.
- Howlett, M., 2009. Government communication as a policy tool: A framework for analysis. *Canadian Political Science Review* 3(2), 23–37. URL: <https://ojs.unbc.ca/index.php/cpsr/article/view/134>.
- Howlett, M., 2014. From the ‘old’ to the ‘new’ policy design: Design thinking beyond markets and collaborative governance. *Policy Sciences* 47(3), 187–207. DOI: 10.1007/s11077-014-9199-0.
- Jahn, G., Schramm, M., Spiller, A., 2005. The reliability of certification: Quality labels as a consumer policy tool. *Journal of Consumer Policy* 28(1), 53–73. DOI: 10.1007/s10603-004-7298-6.
- Johnson, E.J., Goldstein, D., 2003. Do defaults save lives? *Science* 302(5649), 1338–1339. DOI: 10.1126/science.1091721.
- Jones, B.D., 1999. Bounded rationality. *Annual Review of Political Science* 2(1), 297–321. DOI: 10.1146/annurev.polisci.2.1.297.
- Jones, R., Pykett, J., Whitehead, M., 2014. The geographies of policy translation: How nudge became the default policy option. *Environment and Planning C: Government and Policy* 32(1), 54–69. DOI: 10.1068/c1252.
- Julnes, P.d.L., Holzer, M., 2001. Promoting the utilization of performance measures in public organizations: An empirical study of factors affecting adoption and implementation. *Public Administration Review* 61(6), 693–708. DOI: 10.1111/0033-3352.00140.
- Kahneman, D., Tversky, A., 2000. *Choices, Values, and Frames*. Cambridge University Press, New York.
- Kotler, P., Levy, S.J., 1969. Broadening the concept of marketing. *The Journal of Marketing* 33(1), 10–15. DOI: 10.2307/1248740.
- Kouzmin, A., Löffler, E., Klages, H., Korac-Kakabadse, N., 1999. Benchmarking and performance measurement in public sectors: Towards learning for agency effectiveness. *International Journal of Public Sector Management* 12(2), 121–144. DOI: 10.1108/09513559910263462.
- Kuehnhanss, C.R., forthcoming. The challenges of behavioural insights for effective policy design. *Policy and Society* DOI: 10.1080/14494035.2018.1511188.
- Kuehnhanss, C.R., Heyndels, B., Hilken, K., 2015. Choice in politics: Equivalency framing in economic policy decisions and the influence of expertise. *European Journal of Political Economy* 40, 360–374. DOI: 10.1016/j.ejpoleco.2015.06.001.
- Lefebvre, R.C., 2012. Transformative social marketing: Co-creating the social marketing discipline and brand. *Journal of Social Marketing* 2(2), 118–129. DOI: 10.1108/20426761211243955.
- Lepenieš, R., Małecka, M., 2015. The institutional consequences of nudging – nudges, politics, and the law. *Review of Philosophy and Psychology* 6(3), 427–437. DOI: 10.1007/s13164-015-0243-6.
- Levy, D.T., Chaloupka, F., Gitchell, J., 2004. The effects of tobacco control policies on smoking rates: A tobacco control scorecard. *Journal of Public Health Management and Practice* 10(4), 338–353. DOI: 10.1097/00124784-200407000-00011.
- Lunn, P., 2014. Regulatory policy and behavioural economics. Technical Report. OECD Publishing. DOI: 10.1787/9789264207851-en.
- Madrian, B.C., 2014. Applying insights from behavioral economics to policy design. *Annual Review of Economics* 6(1), 663–688. DOI: 10.1146/annurev-economics-080213-041033.
- McGann, M., Blomkamp, E., Lewis, J.M., forthcoming. The rise of public sector innovation labs: Experiments in design thinking for policy. *Policy Sciences* DOI: 10.1007/s11077-018-9315-7.
- Mitchell, G., 2005. Libertarian paternalism is an oxymoron. *Northwestern University Law Review* 99(3), 1245–1277.
- Mols, F., Haslam, S.A., Jetten, J., Steffens, N.K., 2015. Why a nudge is not enough: A social identity critique of governance by stealth. *European Journal of Political Research* 54(1), 81–98. DOI: 10.1111/1475-6765.12073.
- Moxey, A., O’Connell, D., McGettigan, P., Henry, D., 2003. Describing treatment effects to patients. *Journal of General Internal Medicine* 18(11), 948–959. DOI: 10.1046/j.1525-1497.2003.20928.x.
- National Social Marketing Council, 2014. Social marketing benchmark criteria. Technical Report. URL: <http://www.thensmc.com/sites/default/files/benchmark-criteria-090910.pdf>.
- Obama, B., 2015. Executive order 13707: Using behavioral science insights to better serve the American people. *Federal Register* 80(181), 56365–56367. URL: <https://www.gpo.gov/fdsys/pkg/FR-2015-09-18/pdf/2015-23630.pdf>.
- Padberg, D.I., 1992. Nutritional labeling as a policy instrument. *American Journal of Agricultural Economics* 74(5), 1208–1212. DOI: 10.2307/1242787.
- Rebonato, R., 2012. *Taking Liberties: A Critical Examination of Libertarian Paternalism*. Palgrave Macmillan, Houndmills.
- Salamon, L.M., 2002. The new governance and the tools of public action, in: Salamon, L.M., Elliott, O.V. (Eds.), *The Tools of Government - A Guide to the New Governance*. Oxford University Press, New York. Chapter 1, pp. 1–47.
- Saunders, S.G., Barrington, D.J., Sridharan, S., 2015. Redefining social marketing: Beyond behavioural change. *Journal of*

- Social Marketing 5(2), 160–168. DOI: 10.1108/JSOCM-03-2014-0021.
- Schneider, A., Ingram, H., 1990. Behavioral assumptions of policy tools. *The Journal of Politics* 52(2), 510–529. DOI: 10.2307/2131904.
- Science and Technology Select Committee, 2011. Behaviour change, House of Lords, London. URL: <https://www.publications.parliament.uk/pa/ld201012/ldselect/ldsctech/179/179.pdf>.
- Simon, H.A., 1955. A behavioral model of rational choice. *The Quarterly Journal of Economics* 69(1), 99–118. DOI: 10.2307/1884852.
- Simon, H.A., 1957. *Models of Man: Social and Rational*. John Wiley & Sons Ltd, New York.
- Simon, H.A., Smithburg, D.W., Thompson, V.A., 1950. *Public Administration*. Knopf, New York.
- Spotswood, F., French, J., Tapp, A., Stead, M., 2012. Some reasonable but uncomfortable questions about social marketing. *Journal of Social Marketing* 2(3), 163–175. DOI: 10.1108/20426761211265168.
- Stanbury, W.T., Fulton, J., 1984. Suasion as a governing instrument, in: Maslove, A.M. (Ed.), *How Ottawa Spends 1984: The New Agenda*. Lorimer, Toronto, pp. 282–324.
- Sugden, R., 2008. Why incoherent preferences do not justify paternalism. *Constitutional Political Economy* 19(3), 226–248. DOI: 10.1007/s10602-008-9043-7.
- Sugden, R., 2009. On nudging: A review of *Nudge: Improving Decisions About Health, Wealth and Happiness* by Richard H. Thaler and Cass R. Sunstein. *International Journal of the Economics of Business* 16(3), 365–373. DOI: 10.1080/13571510903227064.
- Sugden, R., 2016. Do people really want to be nudged towards healthy lifestyles? *International Review of Economics* 64(2), 113–123. DOI: 10.1007/s12232-016-0264-1.
- Thaler, R.H., Sunstein, C.R., 2003. Libertarian paternalism. *American Economic Review* 93(2), 175–179. DOI: 10.1257/000282803321947001.
- Thaler, R.H., Sunstein, C.R., 2008. *Nudge: Improving Decisions About Health, Wealth and Happiness*. Yale University Press, New Haven.
- Thelen, K., 2004. *How institutions evolve: The political economy of skills in Germany, Britain, the United States, and Japan*. Cambridge University Press, Cambridge.
- Tversky, A., Kahneman, D., 1974. Judgment under uncertainty: Heuristics and biases. *Science* 185(4157), 1124–1131. DOI: 10.1126/science.185.4157.1124.
- Van Bavel, R., Herrmann, B., Esposito, G., Proestakis, A., 2013. Applying behavioural sciences to EU policy-making. Technical Report. European Commission Joint Research Centre. URL: <http://ftp.jrc.es/EURdoc/JRC83284.pdf>, DOI: 10.2788/4659.
- Van Thiel, S., Leeuw, F.L., 2002. The performance paradox in the public sector. *Public Performance & Management Review* 25(3), 267–281. DOI: 10.1080/15309576.2002.11643661.
- Von Neumann, J., Morgenstern, O., 1947. *The Theory of Games and Economic Behavior*. Princeton University Press, Princeton, New Jersey.
- Whitehead, M., Jones, R., Howell, R., Lilley, R., Pykett, J., 2014. *Nudging all over the World: Assessing the global impact of the behavioural sciences on public policy*. Technical Report. Economic & Social Research Council Report. URL: <https://changingbehaviours.files.wordpress.com/2014/09/nudgedesignfinal.pdf>.
- Wu, X., Ramesh, M., 2014. Market imperfections, government imperfections, and policy mixes: Policy innovations in Singapore. *Policy Sciences* 47(3), 305–320. DOI: 10.1007/s11077-013-9186-x.
- Young, S., 2007. The regulation of government advertising in Australia: The politicisation of a public policy issue. *Australian Journal of Public Administration* 66(4), 438–452. DOI: 10.1111/j.1467-8500.2007.00555.x.