Towards a Taxonomy of
Nudging Strategies

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Our understanding of nudges as elements of the designed environment which influence people to behave in particular ways, without constraining their freedom to choose to behave in different ways, is taken from Thaler and Sunstein's 2008 book Nudge. That book has inspired policy makers, organizational leaders and individuals with detailed case studies of many examples of how nudges can be powerful tools for affecting behavioural change without constraining liberty. Below we present two ways of organizing the different kinds of nudges illustrated in those examples into a comprehensive taxonomy or framework. Our goal in both the matrix and tree diagram that we present is to enhance practitioners' comprehension of the myriad of nudging techniques available to them and to facilitate the selection of nudges given their intended behavioural outcomes.

1. Dimensions that Describe Nudges

Our first step in organizing the many types of nudges was to identify dimensions along which they could be described. This was done in a focus group in which a collection of scholars and practitioner experts listed all of the important ways in which they thought the key examples of nudges differed. These dimensions were condensed by the authors into the list presented below based on non-redundancy, parsimony, and applicability to the practical application of nudges.

Self-Control Boosting Nudges are nudges that help people follow through with a behavioural standard they would like to accomplish but have trouble enacting. Such people wish to eat healthier, stop smoking, and exercise and save more, yet have trouble finding the willpower to do so. Mostly these nudges help people make better intertemporal choices so that their behavior in the present better reflects their wishes for the future.

Nudges that Activate Behavioural Standards are nudges that aim to change behaviour in the absence of a strong, pre-existing behavioural standard. These nudges target behaviours that many people are indifferent and/or inattentive to, such as organ donation and littering. Because these behaviours are not top of mind for the majority of people, they are not the subject of New Years' resolutions and people are unlikely to impose nudges that influence these behaviours upon themselves. Therefore, nudges that seek to activate latent or non-existent behavioural standards in people rely on exposing people to conditions in which those behaviours become more likely.

Self-imposed Nudges are voluntarily adopted by people who wish to enact a behavioural standard they recognize as subjectively important. Such nudges may include products, such as Save More Tomorrow, or practices such as freezing one's

credit cards in ice. Because these nudges are voluntary and self-imposed, they can also include coercive incentives while remaining under the rubric of libertarian paternalism, the principal of helping people to make choices in their own best interest without constraining those choices.

Passive Exposure Nudges do not require people to voluntarily seek them out. Rather they shape behaviour passively because of the way they present available options without constraining them.

Mindful Nudges help people to make more rational, cost-benefit decisions about how they behave. They may do this by encouraging people to make decisions while they are in a cooler, less emotionally aroused state, or by bringing to mind certain costs and benefits which they might otherwise not consider. These nudges may also be referred to as "debiasing" nudges that seek to supplant unhelpful automatic, or mindless, behaviour with more conscious deliberate behaviour. As such, people must be aware of these nudges in order to be influenced by them.

Mindless Nudges influence behaviour by taking advantages of well-established behavioural biases. Such nudges include the use of emotion, framing, or anchoring to sway the decisions that people make. These biases may also be referred to as "rebiasing" nudges because they hope to replace, or cancel out, unhelpful automatic behaviour using more helpful automatic behaviour. These nudges therefore do not require awareness in order to be effective, and in fact may be more effective when people are not aware of them because automatic, mindless behaviour, can be stopped or changed by conscious, mindful processes.

Encouraging Nudges facilitate the implementation or continuation of a behaviour that the nudger believes is desirable.

Discouraging Nudges hinder or prevent behaviour that the nudger believes is undesirable.

2. Two Methods of Representing the Nudging Dimensions

Our first approach to organizing this list of nudging dimensions was to create a matrix with nudge categories, or types, at the intersection of each dimension. Although we find the resulting matrix useful, we find it more useful to present the nudging dimensions in a less rigid and categorical way. With so many categories along which nudges could be meaningfully classified, even with simplification it becomes difficult to represent this multidimensionality in a single matrix. Moreover, most of the 'categories' we identified are more accurately described as continuums, which results in several nudges fitting within multiple nudge types. Finally, the important categories or features of nudges that we identified are not orthogonal and we felt that this lack of independence would be better represented by a diagram that represents these features as sequentially nested.

Thus, we propose in addition to the matrix a framework of nudges as depicted in the attached tree diagram. This framework more easily maps onto the process of deciding which nudges are likely to most effectively achieve a particular outcome. Each nudge feature we identify corresponds to a question which decision makers must answer in order to identify the kinds of nudges which most suitably match their intentions. These features are defined below and are not intended to be theoretically precise but rather practically useful.

Table 1. Nudge Taxonomy Matrix

		MINDFUL		MINDLESS	
		ENCOURAGE	**DISCOURAGE**	**ENCOURAGE**	**DISCOURAGE**
ACTIVATING BEHAVIOURAL STANDARDS	**EXPOSE**	Salience, Reducing Required Effort	Salience, Increasing Required Effort	Herding, Defaults, Anchoring, Irrelevant Alternatives, Reputation, Framing, Identity, Salience, Emotion	Herding, Reputation, Framing, Moral Identity, Identity Salience, Emotion
	IMPOSE				
BOOSTING SELF-CONTROL	**EXPOSE**	Reducing Required Effort	Salience, Increasing Required Effort	Emotion, Herding	Emotion, Herding
	IMPOSE	Pre-commitment, Identity Salience, Reducing Required Effort	Pre-commitment, Identity Salience, Increasing Required Effort	Salience, Habit Formation, Mental Accounting, Emotion	Salience, Habit Formation, Partitioning, Emotion

Figure 1. Nudge Decision Tree