



ECAS7011

BEHAVIOURAL ECONOMICS
AND
CHOICE ARCHITECTURE

ASSOC PROF PAUL B. HUTCHINGS

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- ▶ Social cognition models focus upon belief and intention
 - ▶ Conscious processes
 - ▶ Increased recognition that non-conscious processes, cues and contexts play a role in behaviour
 - ▶ At the forefront of these are 'nudge interventions' (Thaler & Sunstein, 2008)
 - ▶ A framework for interventions aimed at changing behaviour by altering the context in which the behaviour occurs (Marteau et al., 2020)

Economic Theory

- ▶ Nudge came out of economic theory which has one primary driving force – expected utility (Von Neumann & Morgenstern, 1953)
 - ▶ People choose the action that is best for them
 - ▶ People know what they like and are able to rank their preferences
 - ▶ And this is transitive:
 - ▶ If I prefer $A > B$ and prefer $B > C$, I also prefer $A > C$
 - ▶ People use the available information, including probabilities of events and potential costs and benefits, to choose the action that is best for them

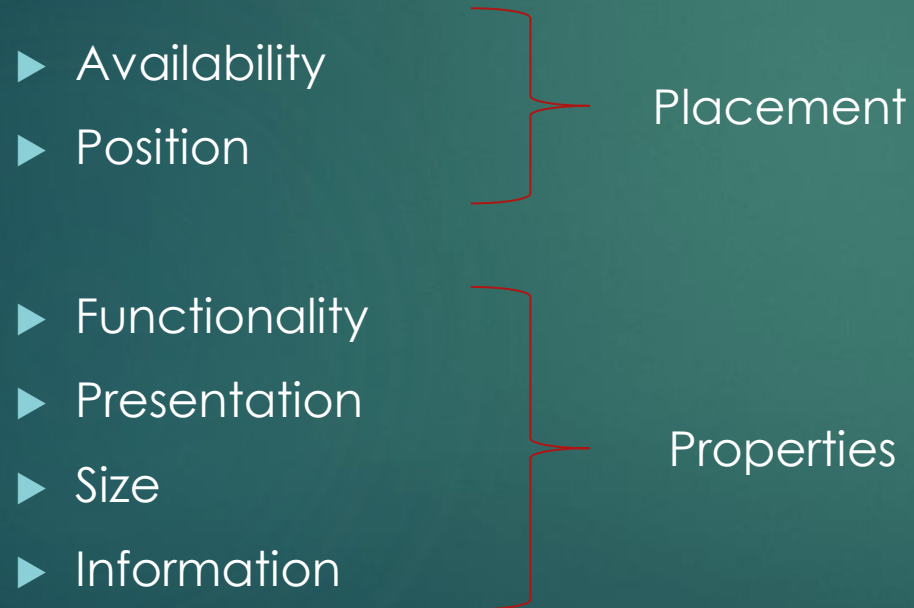
Libertarian Paternalism

- ▶ A way for Government/society to influence utility is to alter the costs and rewards associated with the behaviour
 - ▶ Taxation
 - ▶ Legislation
- ▶ Alternative approach – use psychology, neuroscience, sociology and economics to influence ‘behavioural economics’
 - ▶ Use of Behavioural Insights Units
 - ▶ Development of policy to change behaviour e.g., OECD

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- ▶ Choice architecture – a form of situationism
 - ▶ Behaviour regarded as principally determined by external, environmental factors rather than personality traits or motivation
 - ▶ Better fit with dual-process theories of behaviour (implicit/explicit, system 1/system 2)
 - ▶ Unlikely to be a pure dichotomy
 - ▶ More likely that e.g., motivation interacts with situations people find themselves in (Melnikoff & Bargh, 2018)
 - ▶ Choice architecture highlights the role of context as a predictor of behaviour, and highlights that conscious processing is not necessary for changing behaviour

Typology of Interventions in Proximal Physical Micro-Environments (TIPPME; Hollands et al., 2017)

- ▶ Alter properties or placement of objects/stimuli within proximal, sensorily perceptible, physical micro-environments

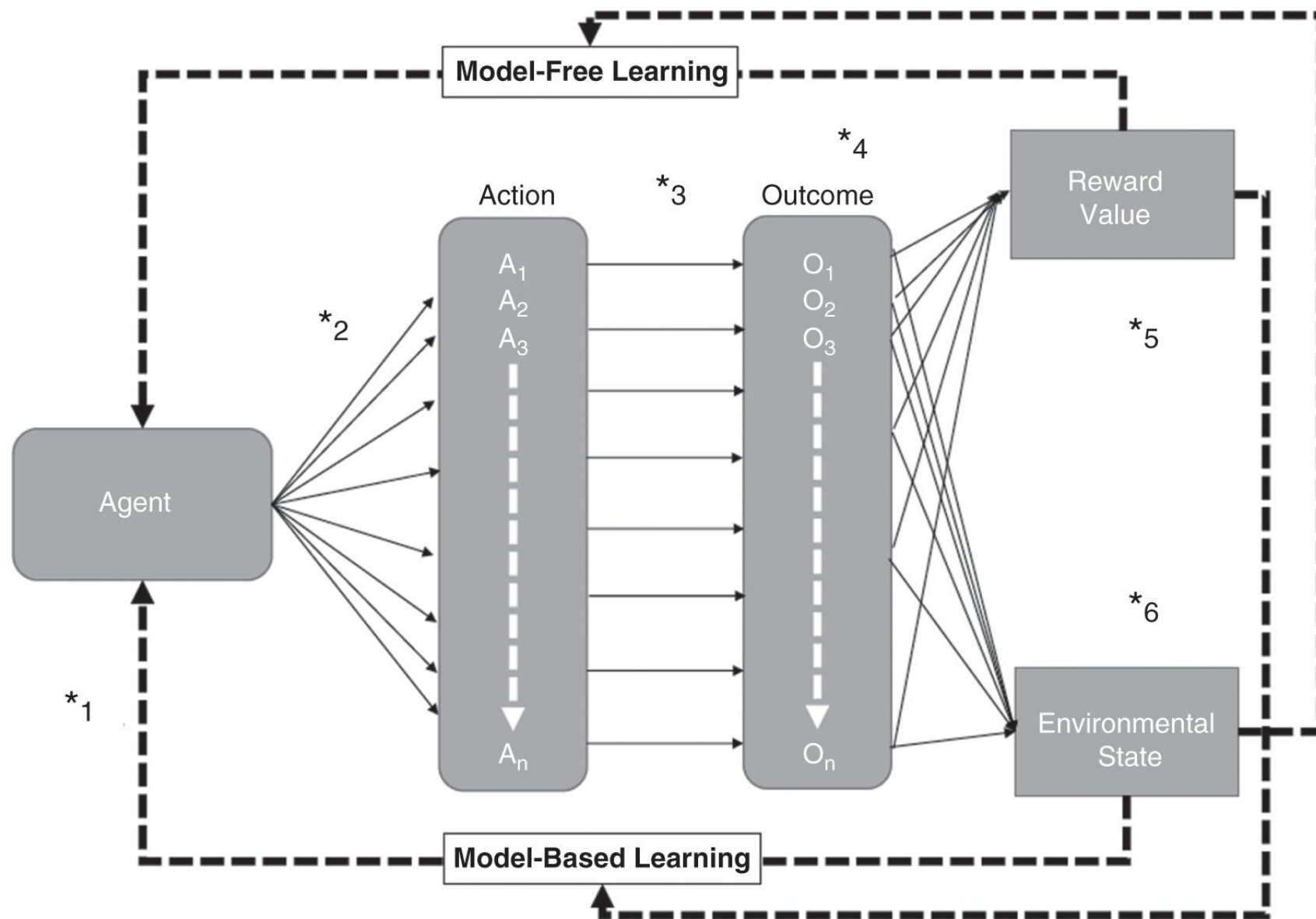


Simplified version of TIPPME for changing selection, purchase and consumption of food, alcohol and tobacco.

Class	Intervention type	Intervention focus		
		Product	Related objects	Wider environment
		Interventions to influence behaviour by changing the product that is selected, purchased or consumed. The product comprises the consumable substance and its immediate or integral packaging and tableware.	Interventions to influence behaviour by changing objects that are associated with the product and typically form part of its proximal surroundings.	Interventions to influence behaviour by changing objects and stimuli that are external to the product and related objects and are not used to store, display, select, purchase or consume the product.
Placement	Availability	Add or remove (some or all) products to increase, decrease, or alter their range, variety or number.	Add or remove (some or all) related objects to increase, decrease, or alter their range, variety or number.	Add or remove (some or all) objects from the set of objects that comprise the wider environment, to increase, decrease, or alter their range, variety or number.
	Position	Alter the position, proximity or accessibility of products or objects.	Alter the position, proximity or accessibility of related objects.	Alter the position, proximity or accessibility of objects that comprise the wider environment.
Properties	Functionality	Alter functionality or design of products to change how they work, or guide or constrain how people use or physically interact with them.	Alter functionality or design of related objects to change how they work, or guide or constrain how people use or physically interact with them.	Alter functionality or design of objects that comprise the wider environment to change how they work, or guide or constrain how people use or physically interact with them.
	Presentation	Alter visual, tactile, auditory or olfactory properties of products, objects or stimuli.	Alter visual, tactile, auditory or olfactory properties of related objects.	Alter visual, tactile, auditory, olfactory or other atmospheric properties of objects that comprise the wider environment, or stimuli therein.
	Size	Alter size or shape of products or objects.	Alter size or shape of related objects.	Alter size or shape of objects that comprise the wider environment.
	Information	Add, remove or change words, symbols, numbers or pictures that convey information about the product or object or its use.	On related objects, add, remove or change symbols, numbers or pictures that convey information about the product or its use.	Within the wider environment, add, remove or change words, symbols, numbers or pictures that convey information about the product or its use.

Class	Intervention type	Examples for intervention focus		
		Product	Related objects	Wider environment
Placement	Availability	Adding non-alcoholic options to a bar's range of drinks, or removing less healthy snack options from a vending machine	Add baskets, trolleys or trays to a shop or restaurant to increase the number of products that people can select and carry	Removing some of the entrance doors leading to a bar or cafeteria
	Position	Place less healthy options further away from seating, entrance, or main thoroughfare	Move refrigerators containing sugary drinks to a less convenient location in a supermarket	Move dividing walls or fixed furniture to alter layout of a supermarket, restaurant, or bar
Properties	Functionality	Allowing easier opening or pouring or demarcate plate to provide guidance for amounts of vegetables vs. meat selected	Demarcate shopping trolley space to indicate designated space for fruit and vegetables	Alter functionality of entrance and exit doors (e.g. change their opening mechanism)
	Presentation	Plain packaging for cigarettes or alcohol products	Colours, textures, and visual design of shelf displays, menus, and other related object	Indoor climate: temperature, humidity, air pressure, lighting
	Size	Change size of portions, plates, packages	Change size of shopping trolleys or baskets, cafeteria trays, or food and drink storage equipment	Size and shape of windows, or fixed furniture
	Information	Health warnings on cigarette packets, alcohol consumption units on glasses	Nutritional information on menus or menu boards	Information on posters, leaflets, or computer screens, in the wider environment

Typology of Interventions in Proximal Physical Micro-Environments (TIPPME; Hollands et al., 2017)



Agent-Environment Interaction Model ((Model-Based/Model-Free Framework; Drew et al., 2011)

*1 Agent model – agent comprehension of the world; incorporates planning and pre-commitment (such as not purchasing alcohol in day to consume in evening)

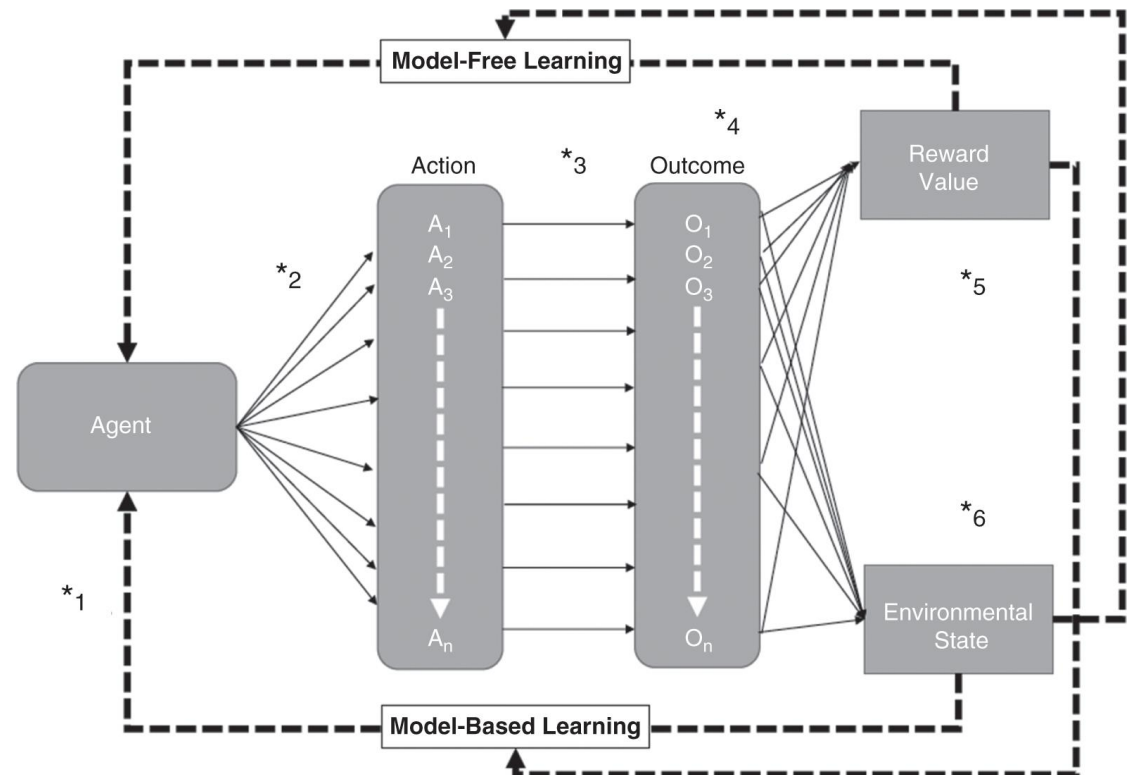
*2 Probability of Action – intervention aimed at shifting pattern of behaviour

*3 Action-Outcome Pairing – degree of effort influencing chance that behaviour is performed

*4 Range of Outcomes – control range of outcomes to attenuate actions

*5 Value of Outcome – Alter reward value to reinforce learning

*6 Environmental State – Actions change the environment



Tasks

- ▶ Use TIP PME, AEIM, and EAST to address the following behaviour change requirements: