Know Techn Pol (2010) 23:487–490
DOI 10.1007/s12130-010-9129-1

SPECIAL ISSUE

# Comment on "Nudges and Cultural Variance"

**Trevor Pinch**

Received: 22 June 2010 / Accepted: 2 August 2010 / Published online: 6 October 2010


**Abstract** In this brief commentary, I suggest Selinger and Whyte are essentially correct in their criticism of the Nudge approach advocated by Thaler and Sunstein. I use some examples from road behavior and traffic planning to amplify the criticism that the simple behavioral economics approach fails to take account of the embedding of humans and technology in the wider social and cultural context.

**Keywords** Nudge · Technology · Choice architects

In their paper, "Competence and Trust in Choice Architecture," Selinger and Whyte offer a series of criticisms of Richard Thaler and Cass Sunstein's book, *Nudge: Improving Decisions about Health, Wealth and Happiness*. Rather than weigh in on all the issues they raise, I will restrict my comments to that part of their essay where they evoke and draw upon concerns in the field of Science and Technology Studies (STS) and the sociology of technology. To cut to the chase, Selinger and Whyte are essentially correct in their criticism of the *nudge* approach for failing to deal with what they call the problem of "semantic variance", which means that in practice nudges will only be unambiguous as to their benefits when there is consensus as to how technologies work and how humans interact with them. The narrow framing of nudges within the concerns of behavioral economics fails to do justice to the complexities of how people and technology actually interact and the wider social and cultural context of technological decision making.

Those who design nudges are referred to as "choice architects" who "design those aspects of technologies, interfaces, and built-environments that present users with distinctive opportunities...for interacting with people, objects and surroundings." The idea of nudges is to help improve choices (for individuals and in some cases society as a whole) by "subtly calibrating the choice context to work with people's

T. Pinch (✉)
Science and Technology Studies and Sociology, Cornell University, Ithaca, NY, USA
e-mail: tjp2@cornell.edu

predictable tendencies to rely on biases." Biases are things which behavioral economists refer to as "mental shortcuts, inclinations, models, gut feelings and heuristics" whereby people make decisions. It seems the key features of "nudges," which separates them from technology in general, is that the context of interaction or "choice context" is routine and mundane such that users are barely aware of the "biases" that they rely upon. Nudges are formally defined by Thaler and Sunstein to be "any part of the choice architecture that alters people's behavior in a predictable way without forbidding any options or significantly changing their economic incentives." Nudges can include semiotic signs, for instance, lines painted on a road to slow down cars and material devices, such as "clocky"—a form of alarm clock that goes missing in action, thereby forcing the "sleeper" to get up to find it and shut it up.

One puzzle in the definition of nudges lies in what the phrase "without forbidding any options" can mean. It seems to mean that in some formal sense, every option or outcome to those being nudged must still be a possibility. In this regard, nudges are different to say a bend in the road, which forces a car to turn. The example of the nudge of road stripes painted on a hazardous bend is a good illustration. The stripes present an optical illusion such that drivers think they are traveling faster than they actually are. Drivers will brake but formally drivers maintain their volition and thereby have the "option" of crashing or of negotiating the bend safely at a higher speed, but this possibility of maintaining "all options open," seems to me, presents a problem within the context of any realistic conception of how humans learn from technological encounters.

Suppose the driver is a race car driver who actually likes to take bends at high speed and can do so quite safely because she has been trained to do so. Now, the nudge (the painted lines) on the road could fool this driver into slowing down the first time she encounters them. The driver may not have had her option of driving fast and safely round the bend "forbidden," but certainly the chances of her exercising that option to take a bend at speed will have been curtailed. That driver's pleasurable driving experience (the thrill of taking a bend at speed) will also have been reduced. Now we might think that, as a society, this is a price worth paying for a few drivers to have their experience reduced for the good of us all, but are we merely to consider the effects of choice within the microcosm of one individualized interaction with the nudge? What will happen in the future? Assume some minimal learning theory that humans draw inductive conclusions from what has happened in the past for the future. Suppose the same racing car driver in the future encounters similar information showing she is speeding from other lines on the road (not painted as part of a nudge) but, being aware of the false information from the nudge she has encountered in the past, ignores the information and actually fails to slow down when she should do and crashes! Now the cost to society could be rather high.

Whether this example is realistic or not, the point is that full consideration of the options and outcomes needs to take us beyond the individual situation and lead us to think about how the "nudge responder" will act in the long-term, and here the technological feature of nudges and how users respond to them are important. Selinger and Whyte already draw upon one well-known example from STS discussed by Bruno Latour—the speed bump—to question the nudge theory. Another example discussed by Latour—seat belt use—is also relevant. It is clearly a

social good for drivers to wear seat belts and to help them do so cars often have features that remind drivers to wear their seat belts. Typically, a light or sound alarm will be set off if the driver attempts to start the car without first fastening the seat belt correctly into its housing. This seems to be a classic "nudge," but, as is well-known, drivers who want to still drive without seat belts attempt to overcome the nudge by devising what Latour calls an "anti-program," say putting a wedge of gum into the seat belt housing thus fooling the nudge that the seat belt is in effect fastened. Again, what this points to is that encounters with technologies are complicated and that users build up competences in their interactions with technology and can also act in concert so as to subvert technologies such as nudges. All this needs to be taken into account for a full discussion of the possible effects and outcomes of nudges to be assessed.

Selinger and Whyte's most telling point in their paper is about semantic variance. For sure, a painted fly is not trivially a target for every man's urine, anymore than a picture of a woman on the door of a latrine (another nudge of course) is a work of art to admire. Another example I like here comes from communication scholars' research on the effectiveness of warnings in cars. Sound warnings are known to be more effective than visual warnings. BMW, in its high-end German models, introduced a verbal warning of excess speed in the form of a woman's voice. It turned out to be totally ineffective as German male drivers paid little attention to a female voice telling them to slow down! A male voice was found to be much more effective. Semantic variance simply expresses the point known to all interpretive sociologists that meaning depends upon context.

The problem of semantic variance with nudges is not just a philosopher's way of posing a counter sample. It goes to the heart of the issue of how people routinely interact with technology and points to the wider social and cultural framework within which technology is embedded. No theory of nudges will be satisfactory without taking on board these sorts of factors.

A last example to consider again comes from the arena of traffic control. A routine problem for the road architects is how to design intersections between two roads where one road does not have priority over the other. Let us think of this in terms of nudges. The available options for drivers approaching such intersections are to go ahead and cross the road or turn left or turn right. How can drivers be nudged to do this safely maintaining all options?

In one of the two countries where I have lived (the UK) the nudge that is offered is referred to as a roundabout. In the US the four-way stop signs achieve the same result. If we think of these two traffic control devices as nudges to help drivers navigate an intersection it is immediately obvious that any assessment of their effectiveness for the "choice architect" depends crucially on skills we acquire in interacting with technology and the wider social cultural framework within which those skills are learnt. In the UK (and throughout Europe), drivers learn to slow down the correct amount as they approach a roundabout (they rarely need to come to a complete stop) and how to let traffic feed in from the correct direction (in the UK priority is given to traffic from the right in, the rest of Europe it is traffic approaching from the left which has priority). As part of driving instruction in the UK, road users learn how to navigate this "nudge," adjusting to the relevant traffic flows, including complicated (and terrifying to Americans) multi-lane roundabouts such as found at

Hyde Park corner in London. In my hometown of Ithaca New York, the municipal authorities have bravely introduced one roundabout. I often watch my fellow US drivers struggle with this nudge. Even the addition of more nudges (painted stripes on the road to, in effect, reduce the two-lane road to a simpler-to-handle one lane) does not sufficiently help US drivers who annoyingly (to me) repeatedly stop at the roundabout and anxiously wait for no traffic at all before proceeding. The skill to navigate a roundabout properly is something UK drivers routinely have mastered. The skills and competences are often so routine that they are invisible. The roundabout would seem to fit perfectly Thaler and Sunstein's conception of a nudge. Its introduction in the US would save wasted gas as cars unnecessarily stop and then accelerate away and would permit far more quick and efficient journeys. Talk of "biases" unnecessarily confuses the issue. It is more a matter of skills learnt in navigating and interacting with the semiotic and material infrastructure of road technology, something that in this case is clearly culturally learnt. If behavioral economics really did actually take on board the full interpretative world of techne and humans as Don Ihde and Selinger and Whyte suggest is needed, then it would have much more to offer.