How do reference points and anchors affect judgments of value and should Governments seek to use them to promote individual wellbeing? (or what Monty Python teaches us about negotiation!)

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Harry: Now I want twenty for that ...
Brian: I gave you twenty.
Harry: Now are you telling me that's not worth twenty shekels?
Brian: No.
Harry: Feel the quality, that's none of yer goat.
Brian: Oh ... I'll give you nineteen then.
Harry: No, no. Do it properly.
Brian: What?
Harry: Haggle properly. This isn't worth nineteen.
Brian: You just said it was worth twenty.
Harry: Burt!!
Brian: I'll give you ten.
Harry: That's more like it. (outraged) Ten!? Are you trying to insult me? Me? With a poor dying grandmother...Ten!?!
Brian: Eleven.
Harry: Now you're getting it. Eleven!?! Did I hear you right? Eleven? This cost me twelve. You want to ruin me?
Brian: Seventeen.
Harry: Seventeen!
Brian: Eighteen?
Harry: No, no, no. You go to fourteen now.
Brian: Fourteen.
Harry: Fourteen, are you joking?
Brian: That's what you told me to say. (Harry registers total despair.) Tell me what to say. Please.
Harry: Offer me fourteen.
Brian: I'll give you fourteen.
Harry: (to onlookers) He's offering me fourteen for this!
Brian: Fifteen.
Harry: Seventeen. My last word. I won't take a penny less, or strike me dead.
Brian: Sixteen.
Harry: Done.

Jones, T., Chapman, G., Cleese, J., Gilliam, T., Idle, E., & Palin, M. (1979). *Monty python's life of brian*. Hand Made Films.

When do we start to frame absolute or relative value? In the above scene from the film Brian was in a hurry to disguise himself and would happily have paid the first asking price for the false beard that Harry was selling. The comic effect is derived from the fact that Harry will not maximise his profit in accepting and achieving his own initial and inflated offer price. The custom or ritual of the negotiation is more important than the bargain that is struck but, even in this fictitious scenario, the first number was the anchor and reference point from which negotiations then proceeded. The bargaining scenario is perhaps the most transparent when identifying the use and effect of reference points, whether it be for a false beard in a middle eastern bazaar or a property in a London estate agents.

Research undertaken by Ritov looked at anchoring in a competitive market simulation and found that in a negotiation between a buyer and seller, initial offers can act as an anchor, and that these initial offer values significantly affect the final profits of both the initiator and the non-initiator, although are substantially more advantageous for the initiator. (Ritov, 1996) Evidence shows that the judgement of value can be influenced when primed with an initial figure which then acts as a reference point.

Chapman and Bornstein conducted an experiment with fake jurors and concluded that anchoring occurs in legal applications, and that plaintiffs benefit simply by requesting large compensation awards. The higher the request the higher the subsequent award tended to be. They also suggested that the size of the request for compensation acted as a ‘causal anchor’ and that the numerical figure anchored more than the subsequent numerical award. A request for a large reward influenced and increased the juror’s view of the probability of the defendant’s guilt and liability. (Chapman & Bornstein, 1996)

Other research has shown that the numbers acting as reference points can be completely arbitrary to the question or the issue being considered and yet still influence the decisions made. In his book ‘Thinking Fast and Slow’ Daniel Kahneman recalls an experiment in which a 100-number wheel of fortune was rigged to only stop at 10 or 65. (Tversky & Kahneman, 1974). Participants were required to write down the number where the wheel had stopped. They were then asked ‘Is the percentage of African Nations among UN members larger or smaller than the number that you just wrote? Then they were asked ‘What is your best guess of the percentage of African Nations in the UN?’ The average estimates of those who saw 10 and 65 were 25% and 45% respectively and yet the number had no relevance and could not possibly assist the participants in their estimates. This anchoring effect occurs ‘when people consider a particular

value for an unknown quantity before estimating that quantity'. (Kahneman, 2012 p.119).

Studies have also shown that the reference point can not only be arbitrary but also implausible and still have an anchoring effect. In an experiment conducted by Strack and Mussweiler (1997) participants were asked to guess the year that Einstein first visited the US after being given the clearly inaccurate dates of 1215 or 1992. The experiment was repeated but using two more plausible dates of 1905 and 1939. The results showed large anchoring effects in both instances. Similar plausible and implausible scenarios were set for the dates of birth for Aristotle and Da Vinci and for the lengths of a whale and the River Elbe. These implausible anchors produced anchoring effects just as large as more plausible anchors. (Gretchen B Chapman, Johnson, & Chapman, 2000; Strack & Mussweiler, 1997)

Experiments have been conducted to ascertain whether the influence of reference points is the response to cognitive overload and whether people of differing levels of intelligence or expertise are susceptible in different ways to the effect of these anchors. Northcroft and Neale challenged the thinking that biases and heuristics were created by the laboratory setting and took their study into a 'real world' scenario and tested the effects of anchoring on amateurs and experts. They found that when valuing real estate, the listed price was the one piece of information out of many pieces of information presented, that acted as an anchor to both the professional real estate agents and those with no knowledge of the market or sector. They concluded as follows.

(1) experts are susceptible to decision bias, even in the confines of their "home" decision setting, and

(2) experts are less likely than amateurs to admit to (or perhaps understand) their use of heuristics in producing biased judgments.

(Northcraft & Neale, 1987)

Wilson et al discovered that anchoring effects occur not only when the priming number has been shown to be irrelevant but when the subjects have also been specifically instructed to ignore it. They were informed and warned of the effects of anchoring and 'instructed to avoid them'. Evidence concluded that they could not. (Wilson, Houston, Etling, & Brekke, 1996)

DISCUSSION

The research referenced above has shown that anchors and reference points can have a profound effect on the judgement of value and have a causal effect on other judgements that are made. This effect is shown to occur in real world situations and the number priming the judgement does not have to be relevant to the situation and can indeed be evidently irrelevant. Experts are as susceptible to the anchoring bias as non-experts and when we are informed of the effects of anchoring and instructed to avoid it, we do not seem to be able to do so.

If reference points are such powerful determinants of the outcomes of decisions that we make in our daily lives, should agents such as Governments or Regulators increase their use and take more control of them? In matters of the health, wealth and happiness of their citizens is there in fact an obligation for them to do so?

Arguments that the state should not seek to influence the behaviour of the individual without at least informing them could be made. The findings of Wilson et al above would suggest that informing people would not negate the effect. If then the argument is made that this is the intelligent or political class looking to influence the behaviours of others because they 'know what's best for them', then Northcraft and Neale's findings above would suggest that these biases apply equally to the experts. They cannot make themselves immune from the effects and so the interventions would be for the benefit of everyone. Daniel Kahneman, Nobel prize winner and a leading authority in the field, illustrated this point when he said that he was far too busy making his own mistakes and 'I have made much more progress in recognising the errors of others than my own'. (Kahneman, 2012)

If we accept that the setting of anchors can assist in promoting behaviours that enhance our wellbeing, then setting them at the correct levels to achieve the desired outcomes is important. As shown above, if the number used for the prime can be both irrelevant and implausible to that which is being judged, then proving that one prime over another is more effective and then apportioning responsibility for setting it will be challenging.

Interventions could be made to remove other effects, such as the size of the claim sought by a plaintiff influencing the suggestion of likely guilt. Awards could be limited to negate this causal anchoring effect but with the potential

consequence of creating different outcomes and motivating different behaviours. Kahneman also considers this and considers a cap of $1million for personal injury cases. Whilst this would end awards above this amount, he also believes that it would act as an anchor to increase the size of the claims that would otherwise have been smaller. He concludes that "It would almost certainly benefit serious offenders and large firms much more than small ones' (Kahneman, 2012 p. 127) which is not an outcome that the intervention would seek to create.

Inadvertent primes can have a detrimental effect. Borrowing on credit cards attracts interest and costs that if paid as early as possible will reduce and ease the servicing of the debt. To assist borrowers a minimum payment requirement was introduced which meant that each month borrowers had to repay a portion of the outstanding balance. In his research Stewart discovered that providing this minimum payment amount acted as a reference point which reduced the size of the payments made than would have been the case if no minimum payment information was present. (23% of the balance paid off as opposed to 40%). The result is increased interest charges and overall debt to the detriment of the borrower. (Stewart, n.d.) Not the outcome intended.

As well as reference points acting as detrimental defaults in debt repayment, research has also shown them to act to the detriment of savings. The percentage of contributions to a pension that must be matched by an employer act as a very strong anchor in terms of the size of contributions being made. Madrian and Shea's analysis (2001) showed that this resulted in lower rates of saving that many employees would have committed to had the matching arrangements not been in place. (Madrian & Shea, 2001)

If we conclude that agencies should create certain reference points then setting them at the right levels to achieve the desired outcomes is important, however their creation alone may not be sufficient to do this. Research has shown that the 'effect of reference points can diminish with the use of incentives and so a combination of factors may be required.' (Slovic & Lichtenstein, 1983)

Investors who bracket the judgement of their returns over shorter periods tend to invest in less volatile assets but which perform relatively poorly over the longer term. Loss averse investors who bracket narrowly are likely to experience poorer outcomes than if they had bracketed over a wider timeframe. If, as a Government, you are seeking to encourage long term saving and then to help maximise the probability of the investor achieving their financial goals, then reference points could be introduced and information provided to help educate the investor to look longer term and invest in assets that are more suitable for

that timeframe. Statements, for example, could use different reporting periods that bracket returns more widely. It is ‘the combination of loss aversion and narrow bracketing, that causes problems’. (Read, Loewenstein, & Rabin, 1999)

Koch however, showed that narrow bracketing is more beneficial in other areas of life. Where individuals struggle with self-control, ‘narrow bracketing is optimal’. (Koch & Nafziger, 2016) Loss aversion helps people to stick to their goals but this is diluted when bracketing broadly. The loss caused by the indiscipline of, for example, eating one unhealthy meal, is not felt with that one lapse as it is mentally accounted for over a longer time frame. The width of bracket required therefore depends on the behaviour that the intervention is seeking to change. It differs when encouraging healthy eating as opposed to long term savings.

Combining reference points, loss aversion and choice bracketing could assist agencies to influence behaviours but setting the right anchors and bracketing effectively in relation to the behaviours they are seeking to influence is clearly challenging.

Other Behavioural biases can be employed to act in conjunction with reference points and anchors to encourage the desired outcomes. The labelling of price differentiators as ‘discounts’ or ‘surcharges’ immediately designates the higher or the lower as the normal price, creating a reference point. (Tversky & Kahneman, 1981) Each induces a different reaction and different behaviours. Welfare benefits are labelled for example ‘child benefit’, which may be ‘evoking narrowly bracketed accounts for these categories and thereby influence self-control’. (Koch & Nafziger, 2016) Labels can be used in conjunction with reference points to influence for the right behaviours.

If agencies can induce individuals to set goals, then these become strong reference points and targets for people to achieve. Loss aversion plays a part as these reference points become the standards by which individuals set their own standards. These mental accounts can be re enforced with labels and even methods of payment. Soman & Cheema conducted an experiment with Indian labourers. Some were paid a pre-agreed proportion of their wages designated for savings in a separate envelope to the rest of their wages. The actual sums saved by the workers who were paid in this way were significantly higher than those who had received their wages in a single envelope even though both groups had agreed to save. Whilst they concluded that they had shown ‘significant benefits of earmarking’, the question of scalability remained. (Soman & Cheema, 2011)

Further research could be conducted to see if savings behaviour can be encouraged when people are paid in different ways. Redesigning the wage slip to make intended reference points prominent and, for those businesses who have an employee benefits choice package, reference points could be made salient as the employee makes their selection. The development of on line bank accounts could also utilise the power of mental accounting by creating sub accounts and savings folders for specific financial goals. These could be personalised with labels and images to reinforce their purpose.

We have seen that reference points alone are not enough and the combination of other Behavioural Economics principles presents some real challenges.

We can question the right of Governments to intervene to change behaviour 'that have motivations that are hidden from those towards whom they are targeted'(Sugden, 2016) but we have seen that the motivations don't need to be hidden for them to work.

If the outcome is the behaviour that our deliberate selves would choose, (assuming deliberate preferences exist), then the argument can be made that Governments and agencies should seek to assist with the use of framing, reference points and anchors. Research would need to be conducted to ensure that they are set at the right levels and to further measure how combining other behavioural principles can contribute to a desired outcome. How responsibility is apportioned between the government and the individual may be problematic. We should always be mindful that 'when framing influences the experience of consequences, the adoption of a decision frame is an ethically significant act'. (Tversky & Kahneman, 1981)

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