AN ECOLOGY OF NUDGES

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Extended Abstract

Cheetahs are formidable predators. They possess a number of adaptations that allow them to heuristically get close to, choose, chase and kill the prey. Despite the existence of such heuristic rules, cheetahs' hunting success rate (which systematically varies depending on the type of the prey) is about 40-50%. Cheetahs fail in the most of their attempts (see O'Brien et al. , 1986), nevertheless this failure rate allows them to survive. Prays possess their heuristics too: they know how to avoid cheetahs, discourage their attack, escape or wiggle out of them. Prays have their own success rate and are able to survive as populations.
Prays' and predators' success rate are not independent, that is, the success rate of their adapted heuristics allow the species to maintain the ecological equilibrium. If preys' heuristics had always been successful, then predators would have disappeared causing significant ecological disequilibria. In an strict ecological perspective, many heuristics are programmed to fail according to a specific rate, in order to establish and maintain the ecological equilibrium of different populations. Any change (also a marginal one) of this rate could cause significant and long-range effects on this equilibrium.

The prey/predator relation is exemplificative of the complex nature of the environment: preys are part of the environment of predators, and vice versa. The environment is more than just a set of inert features which organisms adapt to. It is a complex and living world populated by other types of organisms characterized by specific adaptations and different evolutionary paths. As put my McDermott: "we are environments for each other"
If we recognize that nudge theory is based on the manipulation of the environment, then understanding how this manipulation can affect ecologically related behaviors is critical. Let's use a mental experiment: let us imagine that we want to encourage cheetahs to choose to hunt Thomson's gazelles, instead of other preys. And let us imagine that, for the sake of argument, we can nudge them by making the terrain smoother whenever Thomson's gazelles are close, in order to improve the use of gaze heuristic (used by many predators to chase preys, see Gigerenzer, Todd et al., 1999, p.30)
We will obtain three classes of effects: (1) the first is the one encouraged by the nudge: cheetahs will hunt more Thomson's gazelles. (2) The second is that the population of Thomson's gazelles would significantly decrease and this decrease could impact on the other species that have an ecological relation with them. (3) The third is that cheetahs will have an unnatural availability of meat: their population will increase and many cheetahs will suffer from a number of pathologies (obesity, cardiovascular diseases, etc.), which could affect their own behaviors. The effectiveness of nudging encourages the intended consequences (1) at the price of unintended effects (2) and (3).

In this paper we will discuss the ecological implications of nudging. We argue that each nudge presents some ecological relations with other behaviors. And we pose the matter that nudging entails consequences that are usually unintended by policymakers, although they are ecological related to the nudge. For example putting fruit at eye level could discourage the

preparation of healthy food at home and, hence, could decrease the knowledge of healthy ingredients and the art of cooking, instead of just facilitating healthy nutrition; endowing cars with ergonomic cockpits could encourage hazard behaviors instead of just improving control.
Our thesis is that nudging presents a number of potential, systematic and long-range ecological consequences to the extent that changing one behavior could result in a change of a number of ecologically related behaviors.
Such behaviors are systematic because they are embedded in a stable ecology, so they are quite predictable. But, being triggered only after that the nudge is put effectively into being, they are rarely understood (and anticipated) by policymakers.

In this paper we are not discussing that nudging is unethical or that it backfires because psychological reactance to manipulation. Neither we are arguing that each nudge presents unpredictable consequences and that, as put by Sunstein (2014, p. 585) "sensible policymakers must try to anticipate such surprises in advance (and to fix them if they arise)". We argue that many of such alleged "surprises" are predictable. Because the existence of ecological relations among behaviors, policymakers can anticipate a number of non immediate and (apparently) unintended consequences of nudging.

Selected References

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