REGULATORY IMPACT ASSESSMENT (RIA) AND BEHAVIOURAL RESEARCH: A NEW PERSPECTIVE?

by

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Summary: 1. Introduction. 2. Quality’s Regulatory Pendulum. 3. Homo Economicus and Real People. 3.1 How the findings of the behavioural sciences can improve the quality of regulation. 3.2 Regulatory Impact Assessment (RIA). 3.3 New empirically informed regulation: nudge regulation. 4. Can bounded rationality theories be considered scientific? 5. Conclusions.

1. Introduction

This essay will try to answer the following question: how the findings of the behavioural sciences can improve the quality of regulation? The first part attempts to retrace the development of regulatory quality in European Union Law and, in particular, it explains some parameters in which this principle is assessed. This dynamic process is characterized by many policies, programs and documents that have encouraged member states to promote a regulatory environment able to increase competitiveness, in particular reducing administrative burdens for firms. This way of looking at the develop of regulatory quality has raised the issues of credibility and legitimacy policies in the European Union. In most cases, the credibility is linked to regulatory quality meaning that it refers to the quality of the economic environment in which business operators operate, but the real challenge is to bring about a collective decision-making process, which results in decisions accepted by all individuals as legitimate.

According to scholars, it seems necessary that also regulators, at all government levels, focused on good regulation starting from the point of view of the people.

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Recently, the idea is developing that regulation cannot be effective or efficient (and therefore it is not quality) if policy makers do not consider how target people really react (with their limits and errors)\(^6\), but rather they presume to know what their reactions will be\(^7\).

The second part of this essay explains that «homo oeconomicus» theory – according to which people always pursue their own economic interest in a rational way – this however must be limited\(^8\).

Cognitive science has shown that people are not always rational and are subject to recurring cognitive biases in decision-making\(^9\): people choose status quo for inertia or procrastination; people can be influenced by how information is presented and framed; individual behaviour is greatly influenced by the perceived behaviour of other people\(^10\); and finally, in some domains, people show unrealistic optimism, people feel they are less likely than others to suffer from various misfortunes\(^11\).

The third part of the paper attempts to describe how these new behaviourally-informed regulatory approaches can be integrated into decision-making process. It analyses the following question: «how to turn the plentiful empirical findings about human behaviour into operational regulatory tools»\(^12\).

Thus, according to literature, regulatory impact assessment (RIA) that describes the process of systematically assessing the benefits and costs of a new regulations or an existing regulation\(^13\), it can be used to gather real information from stakeholders, including cognitive errors and unpredictable behaviour\(^14\).

Moreover, both impact assessment and the finds of behavioural research can contribute to bettering the information offered to regulators, defining alternative regulation options with

\(^{6}\) K. R. Popper, *In search of a Better World*, London, Routledge, 1994, p. 4 ss. «To err is human. All human knowledge is fallible and therefore uncertain».


\(^{10}\) G. Rizzolatti and L. Craighero, *The mirror-neuron system*, «Annual Review of Neuroscience», Vol. 27, 2004, pp. 169-192. Prof. Rizzolatti has discovered the mirror-neuron system in humans and it can explain how people perform in their environment. Briefly, humans observe an action done by another individual, and their motor cortex becomes active even in the absence of any overt motor activity. Humans learn without a logic inference, but rather thanks to special neurons that are present in the brain. The mirror-neuron system states that humans are influenced by other humans: for instance, if our friend has a great pain (suffering), also we suffer with him.


attention on the noneconomic incentives for real people, and evaluating the effects of regulatory options and thus favoring a proper control of compliance.

Then, this essay will provide descriptions of new regulations based on a behavioural approach: the nudge regulation. To the extent that errors identified by behavioural research lead people not to behave in their own best interests, paternalism regulation may prove useful. Indeed, the nudge regulation, inspired by paternalist liberalism, can be described as follows: a regulator, but not only, who we can call a choice architect utilises nudge i.e. «changes in the decision-making context that work with cognitive biases, to make better decisions for citizens».

According to authors of nudging theory, a nudge can be well-represented by «a series of white stripes painted onto the road» that is able to advise the drivers to slow down and, in this way reducing the individual and social costs of accidents.

Finally, this essay reports a critique by Richard Ponser on the scientific character of the bounded rationality theory.

2. Quality’s Regulatory Pendulum

Regulatory quality can be described by retracing its evolution within European Union law: it was in the mid-1990s that the search for better quality regulation became systematic.

Starting from the Molitor Report of 1994 focuses on legislative and administrative simplification; Better Regulation, the establishment of the Impact Assessment Board (IAB), Small Business Act, Programmes for Reducing Administrative Burdens, Smart Regulation, EU Regulatory Fitness (REFIT) and further policies have added rules, over time, that can serve as criteria for the assessment of regulatory quality, with particular regard to a reducing in red-tape to increase competitiveness.

The challenge is to change

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16 E. Selinger and K. P. Whyte, Is there a right way to nudge the practice and ethics of choice architecture, Sociology Compass 5/10, 2011, pp. 923 – 935.
17 R. H. Thaler and C. R. Sunstein, Nudge. Improving decisions about health, wealth and happiness, Yale, 2008; trad. it. La spinta gentile, La nuova strategia per migliorare le nostre decisioni sul denario, salute, felicità, Milano, Feltrinelli, 2008, 18 ss.
20 Impact Assessment Board for 2013, p. 2. New or revised legislation should be based on a proper ex-post evaluation of the existing policy framework, efforts to reduce administrative burden should be strengthened and benefits and costs should be, when possible, quantified in impact assessments.
the quality regulatory pendulum direction’s and «to go back to Better Regulation and Smart Regulation and assess their success from the point of view of the citizens».

Indeed, the European Union on the one hand recognizes regulatory quality as one of the key factors to achieving competitiveness and attracting investments, but on the other equal importance is given to all the end-users of regulation, among these citizens, consumers, employees and so on.

In other words, the link between good quality regulation and competitiveness does not mean that the main focus of regulatory reforms is only on business, must be paid attention to people’s needs.

3. Homo Economicus and Real People

First of all, the «homo oeconomicus» theory - according to which people always pursue their own economic interest in a rational way - is limited.

In the past, traditional economic theory postulated that an economic man was also a rational man. This man was characterized by the following aspects: «utility maximization, stable preferences, rational expectations, well-informed on his environment and optimal processing of information».

As is now well known in the legal literature and beyond, researchers in psychology and behavioural economics have uncovered a wide range of departures from rational behavior.

The behavioural approach to distinguish between real and economic man utilises three important bounds on human behavior: «bounded rationality, bounded willpower and bounded self-interest».

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25 H. Xanthaki, European Union Legislative Quality After the Lisbon Treaty: The Challenges of Smart Regulation, cit., p. 15
27 N. Rangone, The myth and reality of good quality regulation tools, in «Italian Journal of Public Law», (4), 2012, pp. 96-97. See also A. Renda et al., Assessing the costs and benefits of regulation, Final Report, CESP, Brussels, 10 dicembre 2013, p. 34. «A typical benefit of good regulation is achieved whenever the latter contributes to addressing a factor due to which the interaction of market forces does not lead to an efficient outcome, a distortion that is often termed “market failure”». See also PCM-Dagl, Rapporto di Benchmark Analisi di pratiche di qualità della regolazione in ambito nazionale e OCSE, 2013, p. 80. The financial and economic crisis has led to new policies in order to guarantee efficiency and competitiveness in Europe and its Member States.
28 N. Rangone, The myth and reality of good quality regulation tools, cit., p. 97.
Firstly, bounded rationality refers to «the obvious fact that human cognitive abilities are not infinite and people have limited computational skills and seriously flawed memories»\(^\text{33}\). However, Herbert Simon, already in 1957, argued that «the concept of economic man needed a fairly drastic revision»\(^\text{34}\).

People tend to rely on heuristics and cognitive biases to reduce the complex tasks of assessing probabilities and predicting values to simplify\(^\text{35}\).

The central idea of the «heuristics and biases program» was that judgment under uncertainty often rests on a limited number of simplifying heuristics rather than extensive algorithmic processing\(^\text{36}\).

The heuristics can be described as following: (i) **Availability heuristics**: judgments about probability are often affected by whether a recent event comes readily to mind. If an event is cognitively available, people may well overestimate the risk. If an event is not cognitively available, people may well underestimate the risk\(^\text{37}\). (ii) **Anchoring heuristics**: people make probability judgments on the basis of an initial value, or anchor, for which they make insufficient adjustments\(^\text{38}\). (iii) **Representativeness heuristics**: people tend to rely on imitations and fast and frugal ways\(^\text{39}\).

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33 M. Quigley, Nudging for health: on public policy and designing choice architecture, «Medical Law Review», 21, 2013, pp. 588-621. «We are, according to research in the behavioural sciences, imperfect decision-makers. We do not always act rationally in our own best interests. Part of the reason for this is that we all fall foul of a number of cognitive biases which affect the way we make decisions».

34 H. A. Simon, A Behavioral Model of Rational Choice, «The Quarterly Journal of Economics», Vol. 69, No. 1, 1955, pp. 99-118. F. Von Hayek, Economics and Knowledge, Economica IV, 1937, pp. 33-54. F. Von Hayek, Individualism and Economic Order, The University Chicago Press, 1948, pp. 33-57. «Economists assumed that - under certain given conditions among which is one where people know everything (some economists used the pleonastic expressions as “given data”) - market is perfect. But this does not answer the question whether the same facts are known to all the different persons in the system or whether the “data” for the different persons may be different. It seems that that skeleton in our cupboard, the “economic man” whom we have exercised with prayer and fasting, has returned through the back door in the form of a quasi-omniscient individual».


38 C. R. Sunstein, Behavioral Analysis of Law, cit., p. 14. ss. D. Kahneman and A. Tversky, Judgment under Uncertainty: Heuristics and Biases, cit., p. 1128. An example of an anchoring and adjustment heuristic is the following: «Consider what happens when someone is asked to estimate the total population of Milwaukee, but does not know the answer and has to respond immediately. In this case, if the person is from Green Bay, he or she likely realizes that Milwaukee has more people than Green Bay (100,000 people). As a result, the person could offer the guess that Milwaukee has about 300,000 people. But, if the person is from Chicago (3,000,000 people), then, knowing that Milwaukee is definitely smaller, he or she might guess that the population is 1,000,000 people. Unfortunately, neither answer is very accurate; the actual population is about 580,000. The reason why each person decides on a wrong answer is that he or she uses the city where he or she lives as
to be insensitive to sample size, misunderstand the phenomenon of regression to the mean, have excessive confidence in their own judgments, and misunderstand the effect on probability of base-rate frequency. Among the most common cognitive biases: (a) **framing and presentation**: people tend to be influenced by the way in which information is presented and their choices do not depend solely by the consequences of their actions. For instance, when patients are told that 90 percent of those who have a certain operation are alive after five years, they are more likely to elect to have the operation than when they are told that after five years, 10 percent of patients are dead. It also follows that choices are often not made based solely on their consequences; assessments may be affected by the relevant frame. (b) **Confirmation biases**: people have a tendency to overestimate information that reinforces things we already believe. (c) **Loss aversion**: for most people, perceived losses weigh more heavily than equivalent gains. (d) **Status quo bias**: in many settings, people appear to give more weight to the status quo than would be predicted by conventional models of rational choice. (d) **Optimism or unrealistic optimism bias**: the tendency to be over-optimistic, overestimating favourable and pleasing outcomes. In

the basis, or anchor, for making a decision and subsequently makes inappropriate mathematical adjustments».


42 A. Alemanno and A. Spina, *Nudging Legally. On the Checks and Balances of Behavioural Regulation*, cit., p. 9. See also M. Rabin, *Psychology and Economics*, cit., pp. 26-27. An example of confirmation bias is the following: «48 students were recruited to participate in an experiment: twenty-four of them were favourable to capital punishment and twenty-four of them were contrary to capital punishment. Then, the researchers distributed the same documents on capital punishment to the two groups in order to estimate how reading of studies moved the attitudes of two groups toward the death penalty, and how they changed their beliefs regarding its deterrent efficacy. The result is that those who were proponents of the death penalty became on average more in favor of the death penalty and believed more in its deterrent efficacy, while opponents became even less in favor of the death penalty and believed even less in its deterrent efficacy».


44 C. Camerer et al., *Regulation for conservatives: Behavioral economics and the case for “asymmetric paternalism”*, cit, p. 1230 ss. «[…] one situation in which people make decisions that seem less than rational is state lotteries. While many people play such lotteries with a realistic sense of their chance of winning, there is evidence that others are not so well informed. There is substantial research showing that people tend to overweight small probabilities of large salient
other words, even factually informed people tend to think that risks are less likely to materialize for themselves than for others. Thus, there is systematic overconfidence in risk judgments, as the vast majority of people believe that they are less likely than other people to be subject to automobile accidents, infection from Aids, heart attacks and many other health risks.45

Secondly, in addition to bounded rationality, people often display bounded will-power. This term refers to the fact that «human beings often take actions that they know to be in conflict with their own long-term interests» 46.

This bounded will-power is linked to a category called «procrastination», that can have significant adverse effects 47. According to standard economic theory, people will consider both the short term and the long term when making decisions.

Hyperbolic discounting is an example of bounded willpower: people often do not appreciate the costs of discounting. They are willing to accept a much lower but immediate reward, though in the final analysis they have to pay a large discount over what they would receive if they were willing to wait 48.

Third, and finally, people’s self-interest is bounded. Economists sometimes assume that people are self-interested. But people also «may want to act fairly and, equally important, they want to be seen to act fairly, especially but not only among non strangers» 49.

In general terms, the conclusion is that «people are lacking clear, stable or well ordered preferences and that their behaviour is susceptible to the influence of the context» 50.

3.1 How the findings of the behavioural sciences can improve the quality of regulation

Cognitive sciences have shown that stakeholders’ reactions to regulations are not always rational but humans sometimes make recurring cognitive errors. Mental shortcuts, rules of thumb such as heuristics, hence, can have a negative effect on regulations, and risk compromising legislator’s objectives and especially reduce quality of regulations 51.

Under this emerging approach – called new governance 52 – behavioural analysis is «perceived as an opportunity to improve the efficacy as well as the efficiency of regulatory intervention, especially when - as is often the case - it aims at behavioural change» 53.
A growing number of policy makers seem increasingly ready to recognise behavioural insights, such as framing, availability heuristics and loss aversion, in the regulatory process; but, at the same time, they lack a clear framework enabling them to incorporate those insights. According to some authors, the fundamental question is, in general, how the study of the cognitive science can enhance the quality of regulations and, in particular, «how to turn the plentiful empirical findings about human behaviour into an operational regulatory tool».

The following sections will seek to answer this question distinguishing: firstly, the instruments that permit us to obtain some crucial information about cognitive errors of end-users, but not only, and we refer to regulatory impact assessment (RIA); secondly, some operational frameworks incorporating behavioural insights into regulation: the nudge regulation.

3.2 Regulatory Impact Assessment (RIA)

RIA is a method of policy analysis, which is intended to assist policy-makers in the design, implementation and monitoring of improvements to regulatory systems, by providing a methodology for assessing the likely consequences of proposed regulation and the actual consequences of existing regulations.

The classical notion of RIA is as an instrument to inform decision makers, not surprisingly it can be utilised to create an informed regulatory process by analysing cognitive errors of end-users.

According to some authors, «one way for regulators to take the findings of behavioural research seriously would be to introduce behavioural test into its RIA». RIA can be useful in helping legislators gather real information, including feedback from stakeholders via consultation - consultation is an ideal instrument to ascertain both the irrational reactions and cognitive errors of end-users and able to be integrated as effective perceptions within policy process.

RIA’s goals as well as the gathering of information on citizens’ behaviour - including cognitive error analysis - is to support the formulation of policy option alternatives and the doing nothing option «avoiding any over-estimation of the social costs of unexpected behaviour».

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53 A. Alemanno and A. Spina, Nudging Legally. On the Checks and Balances of Behavioural Regulation, cit., p. 9.
55 N. Rangone, Il contributo delle scienze cognitive alla qualità delle regole, cit., pp. 151-166 ss.
57 A. Alemanno, Nudging Europe. Why the European Commission should include behavioural insights in the design of regulatory proposals, European Voice, 16 May 2012, p. 3.
behaviour, and any under-estimation of the social costs of, for instance, a limitation of individual liberty [as we shall see RIA guides freedom] 59.

However, the adoption of RIA linked to the findings of behavioural research raise some questions. RIA should develop in two ways: «in terms of information gathering and of evaluating the impact of rules» 60.

In fact, on the one hand, RIA is based on cost benefit analysis 61 which considers stakeholders as rational self-interested maximizers; on the other hand, RIA should incorporate risk analysis to consider heuristics and biases as risks which are to be used to calculate probabilities 62.

The use of both RIA and in particular impact assessment have some limits: (i) competence, the support of cognitive science experts is necessary 63; (ii) impact assessment should be placed in an initial phase of the policy process, followed of further analysis to permit the adjustment of inappropriate norms based on cognitive biases 64; (iii) strengthen the consultation stage 65.

3.3 New empirically informed regulation tools: the nudge regulation

The regulators in order to achieve the goal of regulatory quality can utilise some better regulation tools, such as impact assessment and consultations, both to gather real feedback from end-users, and to elaborate this information to formulate a proper set of regulatory options. However, regulators even if they do not use impact assessment or adopt stable consultations, should take into account some cognitive errors and biases.

According to Richard Thaler and Cass Sunstein, regulators can construct sets of options (a context) from which people can make the best choices for themselves.

Acting as choice architects, policy makers organize the context and environment in which individuals make decision 66. In particular, these architects not only establish a proper

60 R. Baldwin, M. Cave and M. Lodge, Understanding Regulation. Theory, Strategy, and Practice, New York, Oxford University Press, 2012, p. 90 ss. «Risk perception studies are interested in seeking to understand better the individual biases that explain responses to risk».
61 C. R. Sunstein, Cognition and Cost-Benefit Analysis, University of Chicago Law School, John M. Olin Law & Economics Working Paper No. 85, 1999, p. 9. The cost-benefit analysis is defined as a democratic means: it can be used on economic grounds and it can as well as display some heuristics effects and thus can also serve to produce the relevant informations on cognitive biases.
63 F. M. Calvosa, Interazione professionale e competenze multidisciplinari per una better regulation, Roma, Forum P.A., 9 maggio 2011. «Better regulation requires high competences in the following sciences: sociology, economy, law, public communication, statistics».
64 European Commission, Applying Behavioural Sciences to EU Policy-Making, 2013, p. 10. The European Commission suggests placing behavioural insights at the beginning of the impact assessment process, in the problem definition section. In this way, individual behaviour can be one of the drivers of a policy problem that a new initiative tries to tackle.
context, but, rather, through the nudge, they seek actively to encourage the stakeholders to enhance their lives.

The nudge, according to its theorists, is « any aspect of the choice architecture that alters people’s behaviour in a predictable way, without forbidding any options or significantly changing their economic incentives »\textsuperscript{67}. The theory of choice architecture and nudges is rooted in an understanding of biases that people are subject to in various situations where they have choices to make\textsuperscript{68}.

Part of the strategy in relation to alcohol is illustrative of the new approach and how the implementation of policy could alter choice architecture in a way which may have an affect on health\textsuperscript{69}.

The Britain Government, through its Behavioural Insight Team (BIT)\textsuperscript{70}, has established a Public Health Responsibility Deal\textsuperscript{71} according to which some major supermarkets do not display alcohol at the front of their stores\textsuperscript{72}.

This initiative reflects the implementation of behavioural research, which shows that the way the environment is constructed can shape a person’s choices within it. Thus, « it is hoped that by changing the choice architecture in the supermarket, that is changing the positioning of alcohol products, there will be a reduction in the amount being purchased »\textsuperscript{73}.

In general, some nudge strategies can be described as follows: (i) Default rules are based on a presumption of consent unless the interested parties want to choose in another sense. This strategy uses inertia to nudge people to choose something which others consider better for them\textsuperscript{74}.

\begin{footnotesize}
\begin{enumerate}
\item Department of Health, Healthy Lives, Healthy People: Our strategy for public health in England, Presented to Parliament by the Secretary of State for Health by Command of Her Majesty, p. 24. «The latest insights from behavioural science need to be harnessed to help enable and guide people’s everyday decisions». P. Basham, Are Nudging and Shoving Good for Public Health?, A Democracy Institute Report, 2010, p. 4. «The work of the unit will be focused initially on public health issues such as obesity and alcohol consumption».
\item Cabinet Office-Behavioural Insight Team, Better Choices: Better Deals, Consumer Powering Growth, 2011, p. 44 ss. «The Government has established a Public Health Responsibility Deal which is a new mechanism to enable a broad range of organisation (industry, the Retail sector, the voluntary sector, NGO’s, local government and other organisations) to come together to help us all lead healthier lives».
\item M. Quigley, Nudging for health: on public policy and designing choice architecture, cit., p. 594.
\item A. Alemanno and A. Spina, Nudging Legally. On the Checks and Balances of Behavioural Regulation, cit., p. 16.
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Choice architects often select default rules (as nudge) on the ground that they help to produce decisions that will help people to make good decisions for themselves. Recently, various institutions have recognised the effects of default rules: for instance, the European commission has recognized the power of default options when it enacted the Consumer Rights Directive. Indeed, the European commission proposed limiting the use of pre-checked boxes in consumer contracts (the kind that made consumers purchase travel insurance even if they do not want it) in order to save consumers money. (ii) Smart information nudging has been used to reduce energy consumption by using personalized message which indicate to home owners that come of their neighbours have adopted measures to become more energy efficient. This then encourages them to imitate the behaviours of these peers. (iii) A form of nudge «seeks to influence end-users’ choices by exploiting their emotional responses (even by neutralizing them) designed to guide individual behaviour».

Take the public health example of smoking. Common options chosen to curb smoking are: higher taxes, smoking bans in public places, warning messages on cigarette packets. In particular, the latter option, some clear information printed on tobacco packages, among which are the quantity of the toxic elements, a health risk message and so on can help to discourage smokers. In particular, a different framing of this information, for instance including text and a strong image can be a nudge (less sweet) to influence consumer behaviour.

Generally, nudge regulation presents negative and positive points: among the strong points, nudge regulation influences human behaviour without reducing the freedom of end-users, increasing efficacy and it has low costs.

Conversely, some negative points can be described as follows: (a) nudging is not the same as behavioural economics; (b) proponents of nudging are overconfident; (c) in some cases, designing and applying nudges in practice can be confusing, in other words.

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76 European Commission, Applying Behavioural Sciences to EU Policy-Making, 2013, p. 5 ss. Memorandum 2010, Disclosure and Simplification as Regulatory Tools. Congress requires or permits agencies to simplify regulatory requirements through the use of default rules, such as automatic enrollment, to simplify decisions and to promote regulatory objectives.

77 See article 22 of Directive 2011/83/EU on consumer rights: «Before the consumer is bound by the contract or offer, the trader shall seek the express consent of the consumer to any extra payment in addition to the remuneration agreed upon for the trader’s main contractual obligation. If the trader has not obtained the consumer’s express consent but has inferred it by using default options which the consumer is required to reject in order to avoid the additional payment, the consumer shall be entitled to reimbursement of this payment».

78 F. Di Porto and N. Rangone, Behavioural Sciences in Practice: Lessons for EU Policymakers, cit., p. 9


80 N. Rangone, Errori cognitivi e scelte di regolazione, cit., pp. 15-17.

81 For instance, in the U.S. nudge regulation is considered a third way between state interventionism and market driven norms and in the UK, Cameron linked nudge as an idea of mindspace.
sometimes it is not clear whether an intervention qualifies as a nudge; (d) ethical criticism of nudging - nudging is limited by conflicting ideals about freedom, nudging tends to work best when users are unaware that their behaviour is influenced by choice architecture; (e) nudging may infantilize, i.e. decrease responsibility in matters regarding one’s own welfare; (f) there is a problem of competence: what kind of competence is required for a choice architect to offer a nudge? Choice architect must be able to do two things at a minimum: first, they must be able to figure out what biases, arousals, and temptations people are subject to from studies in behavioral economics; second, they must have an adequate understanding of how people perceive choice contexts.

4. Can bounded rationality theories be considered scientific?

Richard Posner argues that individuals are generally rational and his most fundamental criticism of behaviouralism is that «it rests on a too-narrow a conception of the rational-choice model». Richard Posner explains in his review of Jolls-Sunstein-Thaler’s bounded rationality theory that it risks becoming a set of statements without a proper scientific character; in particular he uses Popper’s falsifiability criterion to affirm that bounded rationality theory has no scientific content. In this sense, it seems necessary to explore briefly some aspects of Popper’s thought and then its concrete application.

First of all, Popper wished to distinguish between science (like Einstein’s), and pseudoscience or metaphysical (like Marx’s, Freud’s and so on); and this demarcation is the main problem. The demarcation between the empirical sciences on the one hand, and metaphysics and pseudoscience on the other, requires a new approach.

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82 E. Selinger and K. P. Whyte, *Is there a right way to nudge the practice and ethics of choice architecture*, cit., p. 927. An example of a mistaken nudge is the Toxic Release Inventory, which discloses information to the public on how much pollution companies release into the environment. According to Thaler and Sunstein, only the fact of disclosure information being obligatory can contribute to reduce pollution, but, «such “environmental blacklists”, like the Toxic Release Inventory, do not nudge because they really serve to increase the costs of polluting. Such a Greenhouse Inventory would change financial incentives as opposed to working with the unconscious biases that corporate executives or other key players are subject to».


Popper proposes falsifiability as a criterion of demarcation: according to which «synthetic statements are considered to be empirically scientific [when they] are empirically falsifiable», and, thus, scientific theories are never definitely confirmed, but they can be «refuted by experience».

According to Popper, others theories, such as philosophical or metaphysical ones, even if they are not falsifiable (and thus not scientific theories) can, however, be relevantly meaningful. In this way, philosophical theories can be criticized and refuted.

At this point, Richard Posner reported some examples in which the authors of bounded rationality seem to seek validations of their assumptions, ignoring the inconsistencies in their theories.

For instance, when people resist temptations, thus demonstrating strength of will, this is not treated as contradicting the assumption of bounded willpower, or when people act selfishly, this is not deemed a contradiction of the assumption of bounded self-interest.

Richard Posner concludes: if people became more rational, this means they have learned the lessons of behavioural economics, and confirms rather than refutes bounded rationality theories.

If no observation care falsify Jolls-Sunstein-Thaler’s considerations, «they have no theory, but merely a set of challenges to the theory-builders, who in the relevant instances are rational-choice economists and, I am about to suggest, evolutionary biologists».

5. Conclusions

First of all, this essay has retraced the development of regulatory quality in the European Union: policies, programs, documents - mainly of a non-binding nature – have added rules that can serve as criteria for the assessment of quality regulation.

According to some scholars, within of this dynamic process, «the new challenge for Europe […] is to apply Better Regulation, Smart Regulation, and the 2020 Agenda for Europe to citizens, along with business, thus showing that the Treaty of Lisbon is not a list of good political intentions but an accurate reflection of the new European Union for its citizens and peoples».

Recently, a consensus has emerged around the idea «that regulation cannot work effectively or efficiency if policy makers do not consider how target people really respond», with their limits and errors. Thus, quality of regulations, in this ideal process, is

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92 *Ibidem*, p. 1560.


95 A. Alemanno, *Nudging Europe. Why the European Commission should include behavioural insights in the design of regulatory proposals*, cit., p. 3.
also measured in the light of its capacity to reduce the short circuit determined by the heuristic and cognitive errors, which may be present in the choices made by stakeholders. The second part of this essay has explored bounded rationality theory, according to which people often do not understand and interpret situations as economists normally assumes; therefore, the regulators should be to account cognitive biases and error judgments of stakeholders in order to enact good regulations.

The third part has attempted to describe how these new behaviourally-informed regulatory processes can be integrated into the regulatory state. We focused on RIA which can be used to include the findings of behavioural research in the policy process. Scholars in many fields of the social sciences have discovered that RIA and impact assessment can provide an important contribution to the quality of legislation, both including cognitive error information and support to formulating alternative policy options, with regard to noneconomic incentives adopted for real people.

Then, this essay has described the nudging theory, based on the choice architect which through the use of nudge seeks to change the context: it is important because the context itself can influence the way we think and decisions we make. However, in literature some problems linked to the nudge regulation have been raised: for instance, it is not clear what is a nudge or that it can have some effects on citizens freedom, indeed citizens should trust choice architects that aim to modify their decision-making context.

Let us remember the example mentioned in the introduction, if repainting the roadway to avoid accidents is considered a nudge for nudging authors; in fact, the white stripes are simply the product of a decision the traditional authorities and these stripes do not actually eliminate the problem.

A brief consideration: we have moved from the standard economic approach, according to which each individual has stable and coherent preferences to nudging theory based on the assumption that «the masses are too stupid to make good decisions for themselves».

Following this analysis, I hope I have demonstrated that in my opinion neither of the two paradigms is complete answer. In this way, impact assessment can be used to reconstruct a proper cognitive processes and reduce the negative risks of nudge regulation, mainly those attributed to the use of default rules or active choosing.

Perhaps, the main result of this debate is that regulators, scholars and public opinion have returned to focused on real people, with the attention that regulation tools do not always and automatically produce successful regulations «much as when Aladdin summoned a genie by rubbing a magic lamp».

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99 E. Selinger and K. P. Whyte, *Is there a right way to nudge the practice and ethics of choice architecture*, pp. 928.