The Quest for Behavioural Antitrust

Beyond the Label Battle, Towards a Cognitive Approach

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1. Introduction

An old-fashioned and quite entertaining sci-fi novel, written in the early seventies, told the misfortunes of a professional specialized in making predictions on human behaviours according to complicated rationalizing models and a convenient share of intuition (the goal being, of course, to rule the world, but this is another story). ¹

For many decades, standard academic economics has shared a good deal of expectations with the novel hero, focusing on rigid models of human rationality in order to draw behavioural predictions: this has driven to a highly normative discipline, which for the sake of classification consciousness – and also in order to avoid the usual sport of shooting against the Chicago School alone – we may call here Post-war Neoclassical Economics (hereinafter “PNE”). ² PNE obtained significant results from a formalistic point of view, building an impressive amount of elegant and highly sophisticated models for rendering both microeconomic and macroeconomic operating systems on the basis of what has been considered a series of “[p]owerful simplifications”. ³

Unfortunately, as the Stochastic Man already was well aware (and before him the same founding fathers of modern economics), ⁴ human behaviour, both individual and collective, has much to do with complicated driving forces, such as intuition, beliefs and passions; moreover, the impact of the environment on behaviours should also be taken into due account. Now, these forces and the environmental conditions lead real-life conduct far away from PNE simplified models built upon strict assumptions of perfect information awareness, self-interest and profit maximization among others, or, when we leap to the macroeconomic level, market efficiency and related self-correcting virtues. ⁵ Even if the observation of everyday human conducts clearly shows rather Dionysian dynamics, PNE academia methodically supported an Apollonian stillness, marketing a very narrow and formalized concept of rationality (Herbert Simon, just to add some more Greek flavor to the ongoing metaphor, caustically referred to it as “[O]lympian rationality”). ⁶ In doing so, PNE departed from the previous tradition of economic studies, where psychological observations were plainly considered an analysis cornerstone. ⁷ This is probably the reason why one of the most impressive shifts occurring in the field of contemporary social sciences, namely, the establishment of Behavioural Economics (BE), was provoked by research carried out by psychologists, traditionally trained in observing real-life behaviours, not by economists. ⁸ It is true that research related to experimental economics had been established since the fifties: however, most of it was driven by a highly formalistic way of thinking, as the recurrence of distinguished game theorists among early experimenters shows. ⁹ It was only when a bunch of psychologists put their foot in the door of economic academia that experiments started to focus more and more on the limited cognitive capacities of the economic participant at the VII National Convention of the Italian Society of Law and Economics, and two anonymous referees; usual disclaimers apply. Please send any comments to lucarnaudo@gmail.com.

2. For an attempt to track a broader set of PNE’s intellectual roots, focusing more on John Von Neumann’s landmark contributions to the axiomatization of social sciences, let us refer to Arnaudo 2012.
4. The case of Adam Smith is remarkable. In fact, his Theory of Moral Sentiments (1759) depicts passions and beliefs as pivotal elements for duty understanding human behaviours, an idea somehow shadowed but still recurring in his (now) much more appraised Inquiry into the Nature and Causes of the Wealth of Nations (1776). For a compelling reading about this topic from a legal standpoint, with some interesting reference to US antitrust case law, see Malloy 2010.
5. See Egidi 2005. According to a Nobel laureate commentator, the result of PNE “[h]as been a powerful set of tools to analyze resource allocation at a moment of time in developed economies under the assumption that the markets being modeled were governed by impersonal forces of supply and demand. The competitive model envisioned in general equilibrium theory makes a major contribution by demonstrating that a decentralized system of market forces would generate an efficient system of resource allocation. In this context beliefs played no role in decision making. But valuable as this model has been for the development of an elegant body of theory it is a very imperfect tool for solving economic problems both at a moment of time but particularly over time.” See North 1999.
6. See Simon 1984. An interesting survey of the diverse “[I]mages of knowledge”, related to rationality, that the economic thought had during the last century, was offered by Giocoli 2005.
7. See Bruni & Sugden 2007.
8. Some economists warned very early about the risks of a too restrictive definition of the rational agent, but, as it happened to the later Nobel laureate M. Allais, they remained for a long time isolated: See Angner & Loewenstein 2007.

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agents and, by doing so, started to challenge PNE’s perfect rationality assumptions.\textsuperscript{10} Much is being written about how deeply these psychological studies infiltrated in contemporary economic thought.\textsuperscript{11} On its side, this essay has a rather different ambition: in fact, keeping as an implicit backstage the pressures created on contemporary societies by the current economic crisis and the growing intellectual perception of the need of new models to be adopted for better understanding the economic relationships, our main purpose here is to point at the possibilities of further research developments in view of reaching a sound cognitive approach to law and economics, to be established on the basis of a common decision theory. In doing so, the present essay takes antitrust as a useful case study of this broader cultural transition.

Within this general framework, Section 2 of the essay briefly reminds the rise of BE and some of its main tenets. Section 3 fills a narrower research slot by verifying the ongoing BE’s academic takeover of antitrust, in the form of an alleged newborn Behavioural Antitrust (“BA”), taking the treatment of predatory pricing conduct (with a focus on US antitrust) as an intriguing test-bed for BE’s standard toolkit. Section 4 refers, then, to the new cognitive move experienced within contemporary economic theory, arguing that BE should be properly considered as a part of it, with BA consequently following this cultural path also by means of a new sensibility towards the conduct’s element of intent. Section 5 finally draws some conclusions, supporting the idea that antitrust theory and practice could benefit from a more interdisciplinary cognitive approach.

2. Enter Behavioural Economics

In his Nobel lecture, Professor Daniel Kahneman retraces the steps, starting from experimental psychology, that led him and Professor Amos Tversky to the foundation of what is now widely known as BE. In line with the previous, seminal contributions of Herbert Simon on decision-making, Kahneman sketches the main features of a finite human cognitive ability, namely a bounded rationality, within the framework of a distinction between modes of cognitive function; in fact, it is assumed a two-system view, two modes of thinking and deciding roughly corresponding to the everyday concepts of intuition and reasoning.\textsuperscript{12} At least in the beginnings, along what is considered its mainstream, BE was not opposed to PNE rationality axioms, aiming sooner at improving the descriptive features of its standard model:\textsuperscript{13} such an approach, however, started the erosion of PNE’s intellectual dominance. As a matter of fact, it is hard to hide the basic contrast between BE’s human cognition layout and PNE’s principles of faith. Just to give a clear example, while PNE relied upon an a priori, rigid utility function as the right form to address human motivations, with a consequential impossibility to say anything about how the preferences are shaped and adopted by economic agents, BE turned its attention right to this issue.

Moreover, PNE was not able to deal in a theoretical way with the problems of deviations from standard rationality and conducts in changing scenarios. In other words, it swapped the possibility to consider evolution trends within real-world economies for the rigor of predictable consequences according to a defined set of conditions, considered to be the best viable basis for modeling, and consequently prescribing, economic policies. PNE did so by embracing (and strongly supporting) a model of men defined as operating according to the sole controlled mode of the two-system view mentioned before, and, within this same mode, on the basis of a strict set of presumptions whose intellectual (if not spiritual) roots are surely worth of further interdisciplinary research.\textsuperscript{14} BE, on the contrary, aimed at studying the departures of human conducts from optimal rational performance, focusing on the mechanisms of judgment and decision-making as they operate in the real world. This led to a different interpretation of many conducts previously constrained in the Procustean bed of the cold-minded, static expected utility theory. As it has been stated by Professor Kahneman, “[U]tility cannot be divorced from emotion, and emotion is triggered by changes”: therefore, “[A] theory of choice that completely ignores feelings such as the pain of losses and the regret of mistakes is not only descriptively unrealistic, it also leads to prescriptions that do not maximize the utility of out-

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\textsuperscript{10} According to a commentator, the two psychologists who first managed to obtain due attention by the economists succeeded in it because they were “[A]ble and winning to address economists in standard economic language and venues”. See Rabin 1996, p. 111.

\textsuperscript{11} For an interesting consideration of the successful BE’s development, with an unusual look to some of its hidden driving forces (namely, the financial support to research offered by some US foundations), see Heukelom 2011.

\textsuperscript{12} “[T]he operations of System 1 are fast, automatic, effortless, associative, and often emotionally charged; they are also governed by habit, and are therefore difficult to control or modify. The operations of System 2 are slower, serial, effortful, and deliberately controlled; they are also relatively flexible and potentially rule-governed”. See Kahneman 2003, p. 1451. The two-system view is also at the basis of the latest Kahneman 2011; for an updated survey of the issue see Evans 2012. As regards this contemporary distinction, it is interesting to note its concordance with the ancient platonic metaphor of the two winged horses driving the chariot of human soul: “[F]irst the charioteer of the human soul drives a pair, and secondly one of the horses is noble and of noble breed, but the other quite the opposite in breed and character. Therefore in our case the driving is necessarily difficult and troublesome” (Plato, Phaedrus, section 246b).

\textsuperscript{13} See Vranas 2000.

\textsuperscript{14} A challenging interpretation of the consumer choice theory (one of the PNE’s favourite sons), explaining some of its axioms in terms of religious constraints, was offered by Sahlins 1994. For a thought-provoking revision of consumer choice theory see also Gowdy & Mayumi 2001.
comes as they are actually experienced – that is, utility as Bentham conceived it”. 15

Provided that dealing with emotion is a very important issue for understanding human behaviour (we will see it in a while with more detail), in order to sum up the knowledge framework established by BE, research we can say that it introduced the powerful idea of dealing with the blurred aspects of economic conduct by referring to systematic shortcuts and human cognition limitations, such as “cognitive biases” and “heuristics of judgments”, taking into account both (alleged) systems of human decision-making procedures. As an increasing amount of publications offer valuable BE summaries, for the sake of textual efficiency we do refer to these works for more in-depth consideration of the topic, 16 and, taking by granted the common knowledge of main BE’s tenets and related fallouts, from “prospect theory” to the latest “nudge” chats and tricks, 17 we move to the recent uprising of BE as a reference frame for antitrust.

3. Behavioural Economics and Antitrust

BE was introduced in the legal academia by a rather precise and distinguished company of Law and Economics (L&E) scholars, whose efforts can be tracked down since the end of the nineties. 18 Then, the spreading of BE knowledge within legal studies has been impressive, as also a recent Westlaw search for the term “behavioural economics” in American law journals vividly pointed out. 19

Due to the long-lasting love affair of L&E studies with antitrust, a discipline typically laying at the intersection of the two components of the binomial, 20 its targeting by the new behavioural trend does not surprise. To say the truth, when considering the growing fortunes of BE, 21 the process towards a BA could have been expected to occur much faster: as a matter of fact, it is only in the late nineties appearances of BE in law journal skyrocketed within the legal field. 

If we remind ourselves what Professor Kahneman stated when recounting his two-system view of human cognition and decision-making processes, it can be said that, while an Antitrust PNE-oriented (“PNEA”) strictly relies upon the controlled mode, BA refers mainly to the intuitive one. Along this line, it has been recently blamed that antitrust discipline “[W]orships at the shrine of rationality”, stating that there is not unanimity in the definitions, but, at the same time, pointing at the fact that “[T]he most prominent concepts of rationality focus on the internal consistency of the actor’s conduct, including whether the actor chooses appropriate means through which to pursue her self-interest”. 22

It is important to stress that the choice mentioned above is not a mere matter of pure ideas, as from a practical viewpoint the consequences of the adopted rationality model are blatantly different: for instance, PNEA per-
The series of conditions that place a troublesome burden of the reasonable expectations of the conspirator to recover the consequences of such interpretation in the courts, the specific strategy (with short-term losses borne in order to secure long-term benefits). In US antitrust jurisprudence.

This condition has been traditionally connected to the view on the firm’s rationality circulated by one of the fiercest PNEA champions, Professor (then judge) Robert Bork, according to which predation is a pure matter of rational investment, so that the plaintiffs must prove the reasonable expectations of the conspirator to recover, in the form of later monopoly profits, more than the losses suffered. The success of this interpretation has been impressive, participating to what is generally considered as a broader process of Borkenization occurred to US antitrust jurisprudence. Apart from the label we may use, the Supreme Court quickly embraced this restrictive view, and, by establishing a long-lasting reference case law upon PNEA assumptions, “[c]reated a legal presumption, based on economic logic, that predatory pricing is unlikely to threaten competition”. However, as it has been recently remarked, “[t]he world is not so simple”. When we see firm’s behaviours through the lenses of different theories, other stories can be told, with diverse economic logic to be possibly taken into account – and, as a practical consequence, diverse judicial assessments of the relevant conducts. For instance, according to a well-established literature (even with a sound historical background, dating back at least to the Victorian-era British shipping cartels), one plausible explanation of predatory pricing conducts is that predation is rational in the view of a firms’ strategic behaviour for “marking” its own territory, signalling its aggressive attitude to real or potential new-entrants as a means for establishing a reputation effect. Another explanation, more in line with BE literature related to cognitive limitations and bias, could be that, far away from being a perfect rational actor that maximizes the utility of its business decisions, a firm may incur in a long series of biases in judging risks, costs, and benefits, consequently adopting behaviours that cannot be necessarily rational.

To be more precise, firm’s behaviour should be considered here by destructuring it as a complex, dynamic sum of subjective choices made by the individuals entitled with the powers to orient firm’s decisions, with the consequence that even the strong assumption (often heralded by PNE supporters game-theory-oriented) that firms are players learning by their own errors in a context of repeated games definitely loses its strength. In fact, the new behavioural trend is clearly (re)introducing attention to the subjective dimension of illicit conducts, focusing on individual behaviours and the way to assess them; to be more explicit on the issue of the “learning by crashing” assumption mentioned above, managers may also be considered repeat players, but with no sufficient incentives (due to the recurrence of a lot of subjective bias, as we will see in a while) in order to avoid repeat errors.

29. US Supreme Court landmark case is Brooke Group, 509 US 940 (1993), referring to which a rather cautious comment recognized that the burden of proof it established “[[i]t is likely to be difficult to bear]” (see Blair & Kaserman 2009, p. 160). The Brooke recoupment doctrine has been recently upheld by the Supreme Court also when deciding a case related to predatory bidding behaviours in a monopoly context: see Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co., 549 US 312 (2007). European enforcement policy, it must be said, is far more “relaxed” as regards the fulfillment of the rational assumptions endorsed by US jurisdiction. In fact, according to the EU Commission in order to assess predatory pricing strategies there is no need to demonstrate that the dominant firm had a realistic chance of recouping the losses incurred during the period of predation. EU primary courts upheld this interpretation, although stating that the Commission could take into account the recoupment as a relevant factor in determining whether a conduct is abusive (see European Court of Justice, case C-202/07TP France Telecom v. Commission, Judgement of April 2, 2009. For a challenging consideration of this case, used as an example for stating that “[u]nlike US antitrust law, EU competition law accommodates irrational predation scenarios”, see Petit & Neyrinck 2010, p. 9. Also according to Van den Bergh 2013, p. 21, “under current law, the abuse system of the European Union is more hospitable to behavioral insights than the US prohibition”).

30. According to a commentator, “[v]irtually all would agree that the Supreme Court, in its change of direction of antitrust law beginning in the late 1970s, drew principally from Judge Bork’s book both for guidance and support of its new consumer welfare basis for antitrust doctrine.” See Priest 2008. Another scholar went further, considering that, in spite of fierce and enduring debates related to the validity of Judge Bork’s statements, the Supreme Court “quickly adopted Bork’s “consumer welfare prescription”, making it the stated law of the land”. See Orbach 2011, p. 135. The sole reference to Judge Bork’s views, however, appears to be a cultural oversimplification. In fact, an in-depth analysis already urged to rethink the antitrust intellectual history, underlining the role played by Chicago and Harvard legal thinkers: see Kovacic 2007. On the topic see also Elhauge 2007.


32. See Mateus 2011, p. 245. It is interesting to note that the same text, by adopting perfect rationality assumptions for proposing an interesting predation test based on firm’s costs, explicitly consider the need to focus on “real” economic behaviour, as “[i]t is extremely difficult to apply any meaningful test based on game theory without starting with the analysis of the structure of the market and the game being played by participants” (ibid., p. 248).


34. See Leslie 2010, p. 289. See also Gullín & Gundlach 1996, p. 89. For a classical analysis of reputation effect as a strategy of signalling predation see Milgrom & Roberts 1982.

35. Drawing a clear line between individual and company’s liabilities, as well as fully understanding their relationships, is one of the most challenging issues of law in general and antitrust in particular, notwithstanding the simplistic solutions often adopted by legal systems for practically dealing with it. No need to say, such complex issue cannot be addressed here: for a useful introduction to the so-called “Societas delinquere non potest problem”, see De Maglie 2005.
With particular regards to predatory pricing, it has already been pointed out that attempts to explain predatory pricing in terms of rational profit-maximization ignore that such conducts, as firm’s actions are composed by human actions adopted by the firm’s managers, “[S]hould not necessarily be sought in the realm of economic theory, but may more appropriately be sought through the insights of experimental psychology”. On the same line, according to another commentator, behavioural evidence supports the hypothesis that a dominant firm may consciously engage in high-risk, negative-net present value predation, providing as a challenging example the one of a manager who, facing a market share slide,

[M]ay be inclined to engage in negative expected value predatory pricing (i.e., without a rationally sufficient likelihood of recoupment). Such managers may be willing to take higher risks than rational profit maximizing justifies, hoping they will succeed in reestablishing the firm’s lost long-term market position.37

When embracing this view, a long list of “managerial biases” can then be added for maintaining the real-life recurrence of predatory pricing cases. Overconfidence experienced by ambitious corporate men in their own decisions (and consequently in the possibility of winning more easily the price war engaged against a competitor) is probably the most relevant one of these biases.38 It is an overconfidence, we’d like to add obiter, that the easier availability of fresh money for refinancing firm’s strategies experienced during the financial booming before the current crisis may have arguably increased; this same overconfidence also plays an important part when reconsidering more broadly corporate governance issues and the consequent transitions in corporate law (many of them having significant antitrust relevance) now at stake.39

What is interesting, the short circuit among utility, emotions and changes evoked in the previous pages is the pivotal element of the behavioural equation emerging here. It is useful to mention, then, a research line related to the consideration (and possible management) of emotional biases by the law.40 By doing so, these researches are pushing the boundaries of behavioural analysis towards an even more in-depth consideration of psychological issues further away from the abstract-modeling trend established by PNE, as well as from any reformist aims of PNE rationality originally pursued by Kahneman & Co.

We will refer again to this issue when we will deal, in the final part of this essay, with a possible “cognitive upgrade” of economic and antitrust thoughts. As regards antitrust practice, at least to add some real-life taste to our writing, let us say that it is not unusual for fact-finders, when checking firm’s internal documents, to stumble into notes and comments written by executives that clearly show a very personal, emotionally biased approach to competition (not to mention to competitors). This kind of evidence busted an interesting literature about the struggle between “hot docs” and “cold economics”, as, according to some commentators, firm’s internal documents often prove too much and may therefore impair the judicial assessment.31 It may be agreed or not with this interpretation: what is sure, in any case, is that the business attitude emerging from this kind of documents gives a crisp impression of real firm’s behaviour that is a lot far away from the perfectly rational machine supported by PNE with its nearly automatic denial of some business conducts because of their alleged “irrationality” or “highly speculative” conditions to be fulfilled.42

3.2 On Paradigm’s Shifts and Ideological Denials

Sticking with BA for a few lines more, after having briefly recalled by means of the predatory example how antitrust enforcement may change as a consequence of a behavioural approach, we would still like to mention that applications of the same approach are much broader. According to what was recounted by a growing amount of scholarship contributions, they span from merger control to cartel prosecution, not to mention the redefinition of traditionally tricky issues of antitrust, such as resale price maintenance43 or (although limited to EU antitrust) excessive pricing,44 eventually referring to a broader interpretative frame of behavioural exploitations of the consumers pursued by the firms – BE, it must be remembered, applies for interpreting both consumers and firm’s behaviours.45

Resistance to the new behavioural trend has been, and still is, fierce: this is no surprise, when we consider the amount of intellectual/academic sunk costs related to the establishment of a successful paradigm, as the PNE and its consequent PNEA have surely been. What is

37. See Tor 2003, p. 55.
38. Not surprisingly, overconfidence is among the hottest topics of behavioural finance: for a recent field research, conducted by using official data provided by firms subject to SEC Accounting and Auditing Enforcement Releases, see Schrand & Zechman 2011. The study significantly concludes (ibid., at p. 32) that “[T]he executives at the misreporting firms exhibit characteristics consistent with greater levels of overconfidence, and overconfidence is associated with optimistic decision-making. Better internal and external monitoring does not explain the optimistic estimates of these firms relative to those of a match sample. These fact patterns are consistent with a slippery slope path to financial misreporting in which an overconfident manager initially misstates earnings because he is optimistic with respect to recording accruals or has unrealistic expectations that performance will improve and thus that minor earnings management in the current period will go undetected.”
39. For a useful reading on such transitions, aiming at keeping the corporate structure as a complex, yet well operating system of checks and balances for “satisfying the human need for ambition, creativity, and meaning”, see Maniks & Minow 2011, p. 9 et seq.
40. See Blumenthal 2009; Abrams & Hila 2010. For an analysis more focused on L&L, see also Huang, 2009.
42. On the topic, with a special focus on the Supreme Court’s Brooke Group case, see also Leslie 2010, p. 272 et seq.
43. See Tor & Rinner 2011.
44. See Akman & Garrod 2011, p. 403.
45. See Huffman 2010.
surprising, however, is the recurrence of episodes of intellectual denial that has little to do with cool-minded criticisms of the new interpretations proposed, depending much more on patent ideological defense. Many objections are not new, as they started their career by challenging BE in itself and have been simply transposed to BA: as a consequence, the same responses (or lack of responses) can be replicated within the antitrust arena. It is a whole different affair, however, when it happens to read statements like the following:

[Data related to firm’s behaviors and mergers] could not take the place of neoclassical economics based on the assumption of profit maximization even if all of the challenges were met. Economic reasoning is used to make sense out of complex real-world facts, and economic models provide the basis for predicting that particular mergers would lessen competition.

In fact, what we do find here is an enduring faith in the predictive power of abstract economic (namely, PNE) models: provided the understandable fascination of such power, a systematic overruling of observable reality by abstractions, as elegant as they may be, does not seem plausible, nor recommendable at all. Before they can be predicted, human actions should be captured by taking into account their complexity, and in this view real data do matter, as they are fundamental elements for understanding real behaviours within a sound theoretical framework: let us use, then, an argumentum auctoritatis for considering that

[A] theory is not like an airline or bus timetable. We are not interested simply in the accuracy of its predictions. A theory also serves as a base for thinking. It helps us to understand what is going on by enabling us to organise our thoughts. Faced with a choice between a theory which predicts well but gives us little insight into how the system works and one which gives us this insight but predicts badly, I would choose the latter.

46. For a recount of such objections, first of all the alleged lack within BE of an organizing principle, see Reeves 2010, pp. 2 et seq. In a broader cultural perspective, also relying upon what previously sketched about PNE’s rationality model, it is useful to refer to a recent comment, according to which “Critics of behavioralist arguments may object primarily to the terminology, inferring from the word “irrational” that conduct is either unpredictable or contrary to natural norms. In fact, there is nothing rational about conduct that is inconsistent with demonstrable norms of behavior, or irrational about conduct that hews to those norms. “Rational choice”, then, is simply a brand that scholars have applied to idealized conduct” (Huffman 2012, pp. 27–33).

47. Werden et al. 2010, p. 7. In the same text, by the way, can also be found the following statement put against BE usefulness for understanding economic behaviour: “If firms do not randomly select individuals from the general population to make their important decisions, but rather hire and promote employees on the basis of their skills. Even if most individuals make badly biased decisions in the face of risk and uncertainty, Wall Street analysts do not because they are selected for their understanding of probability theory” (ibid, at p. 9). Personally speaking, in light of the ongoing economic crisis, such statements sound pretty much like dark humor.


Leaving aside a discussion that could drive this essay far away from its main purpose (although bringing us to the real core of the philosophy of economics), we would like to come back to the issue we adopted some pages ago, namely the usefulness of an introduction of BE knowledge within antitrust, for suggesting the possibility of a further step. Apart from what appears to be a mere déjà-vu of a long-lasting ideological debate, often rhetorically driven, there should be no doubt that BE already played a useful role in challenging some rationality assumptions stemming from the long-lasting PNE intellectual monopoly. These were precisely the assumptions, together with other (very well-marketed) PNE macroeconomic ideas, that for many years impaired antitrust enforcement by giving the judges an illusion of simple, easily applicable solutions at hand for interpreting and deciding a vast collection of business conduct.

True, PNEA supporters usefully contended with the lack of uniformity and policy disarray that poisoned antitrust at the middle of last century, the “[B]ad economics and worse jurisprudence” famously stigmatized by Professor Bork51 – although someone already wondered if the cure wasn’t worse than the disease, as it doesn’t seem that the discipline gained much more clarity or predictability. But many things have changed, meanwhile, in the cognition of human behaviour and collective interaction: we must, then, duly take them into account.

Having paid our intellectual debt to the various efforts lavished around the PNE’s enterprise, it is time there-
fore to move further, and, as regards human behaviour having economic and legal relevance, consider the new knowledge at disposal. BE is surely part of this move: in fact, as it has already been usefully observed as regards its practical impact on antitrust enforcement, “BE may help enforcers focus on the right cases, as both the possibility that manipulation is being carried out and the effectiveness of the manipulative techniques employed will depend on the existence of cognitive bias.”  

Moreover, a growing amount of scholars is showing how the main features of BE: apart from the eventual success of such an effort, it is important, on the one hand, to recall the experimental spin of BE researches and, on the other hand, to remark the “view from the outside” characterizing the same research, typically based on the observation of behaviours within a controlled environment. In the last ten years, however, the methodology of experimental economics changed dramatically, mostly by relying upon new techniques of neural observation originally developed within the field of cognitive neuroscience. As a remarkable fallout of this research trend, a whole new field of economic research, labeled neuroeconomics, is blossoming, trying to study brain activities and correlate them with decision-making in order to better understand the human behaviour having an economic relevance. 

Moreover, a growing amount of scholars is showing greater sensibility towards the knowledge related to human cognition and behaviour obtainable from studies usually kept far away from economic academia. If experimental psychology, thanks to the major efforts of Kahneman and Tversky, has been the first to be cleared since the seventies, several other disciplines are following the same path, with contributions from cognitive sciences playing a leading role. Perspectives are, to say the least, exciting, pointing at a real epistemic change: a deep rethinking of social science, with many disciplines “going cognitive”.  

Along this line, Cognitive Economics (“CE”) must be considered as an established reality already, and legal studies are on a similar track, although still restricting their focus mostly on criminal features and applications. According to one of the first surveys of the trend within contemporary economics,  

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Of particular interest, within this progress, is the contribution of strongly evolution-oriented sciences, first of all evolutionary biology and psychology. In fact, research’s results provided by these disciplines offer a fresh insight on the adaptation of human behaviour to external stimuli over time (this meaning under the constraint of change and in the face of uncertainty) and on the interactive development of human institutions, revealing at the same time deeply rooted cognitive programming effects we are usually not aware of, but which could help explain many aspects of human behaviours having both economic and legal relevance.  

From a broader cultural perspective, it is interesting to add that, at least until the beginning of last century, economic thought showed great interest and intellectual proximity to evolutionary biology: in a way, it is fair to consider that the most updated economic research is just resuming a path neglected during the last decades, rediscovering a strong interdisciplinary connection. All in all, this sounds very similar to a farewell to PNE’s abstract and static approach, with the understanding of human behaviours aptly related to cognition models.

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53. Ori 2009, p. 400. For a very critical view of the issue, with a focus on the expected activities of the newly established Consumer Financial Protection Bureau within the US, see, on the contrary, Wright 2012.

54. Related literature is developing wildly since the foundational text of Camerer et al. 2005. For a concise introduction see Camerer 2008, where the new discipline is defined as follows: “[N]euroeconomics is a combination of mathematical frameworks, experimental paradigms, and lab and field behavioural data about peoples’ choices (from economics) and measures of neural activity (from neuroscience). The goal is to relate mathematical theories of choice to neural measures, to build hypotheses that constrain competing economic theories, to predict effects of cognitive and emotional factors on individual choices, and to suggest when people do not always choose what is best for them (and what good policies follow).”

55. See McCubbins & Turner 2012.

56. On the topic, let us refer to Arnaudo 2012, p. 109 et seq. (an English summary of this line of research has been provided by Arnaudo 2011. From a philosophical perspective, foundations of a cognitive approach to the law can be traced back to Sartor 2005.

57. For an updated survey of US legal system, see Jones & Shen 2012.


59. On this broad topic, for a first introduction, let us refer to Arnaudo 2010.

60. See Hodgson 2008. On a similar vein, early contributions of Alfred Marshall to neurobiology (as well as his recurring reference to mental models in explaining economic processes) are recalled by Egidi & Rizzello 2003, p. 3. As regards the tight and long lasting connections existing between economic and biological thought, it is worth quoting the opinion of a renowned evolutionary biologist, according to which “[T]he theory of natural selection is, in essence, Adam Smith’s economy transposed in nature”. See Gould 2002, p. 121.
developed on the basis of practical experimental research (not to mention, for the joy of the academics, the fascinating array of thought experiments to be tried). At the same time, however, also traditional BE is challenged, with its original focus on experimental psychology put under pressure by the new cognitive, interdisciplinary approach. Taking this view, it appears always more legitimate to consider BE as a part of CE, together with neuroeconomics, merging their lines of research in a complex vision of behaviour where sound models of mind, built upon observation “from the outside”, as well as information “from the inside” provided by cognitive neuroscience, are combined in order to better understand real-life actions and their motivations. To be clear, cognition (and not a narrow ideal of rationality, usually married with a tacit presumption that everything else is just unmanageable irrationality) is here at stake. Apart from these broader issues related to the ongoing redefinition of several discipline’s boundaries in view of reaching a common workable decision theory, but taking into due account the happily turbulent developments of new economic agent’s models, when we come back to the core of this essay we are forced to raise the question about what should be the better direction to be followed by contemporary antitrust.

At least in our view, the current trend which is behaviourally oriented is certainly important, but somewhat too narrow, as it could definitely be improved by referring to the new cognitive move that is reshaping economics and, as already mentioned, even starting to infiltrate legal theory and practice. It is not a matter of labels, say BE versus CE (not to mention the Chicago School saga that is plaguing since years the academic debate). Rather, it is a matter of contents and research orientation as a driving force (also) for practical antitrust enforcement. Under this viewpoint, an academic will replicate the current success of L&E behavioural takeover within antitrust, as the ongoing one, is perfectly understandable: nevertheless, this might not be enough to definitely go beyond the PNEA bottlenecks and establish a new, fertile cycle of antitrust analysis. In reverse, a well-grounded multidisciplinary, cognitive-oriented approach would be much more apt for fulfilling such duty.

Signs of further movement can already be ferreted out. It is the case, for instance, of some recent papers explicitly focusing on evolutionary biology. Again, the case of predation comes in handy for briefly pondering over the issue. When in the previous pages we referred to the firm exploiting its dominance as a “bully” and used the animal metaphor of “marking the territory” for dealing with signalling purposes of predatory pricing, we did it for the sake of pointing, although anecdotally, at some psychological and biological features that are inherently part of individual behaviour and cognition, but continue to be blatantly ignored by the still dominating PNEA Apollonian presumptions related to rational business conducts. We do believe, on the contrary, that these conducts ought to be profitably investigated by means of a much more complex approach, such as the cognitive one supported here.

Provided what hinted before about the emergence of analysis related to emotional bias, and notwithstanding the clear difficulties to establish such behavioural analysis, a multi-factor assessment seems to be a very promising, although until now almost a completely forgotten perspective, in order to better understand real behaviours having a direct impact on business conducts with an antitrust relevance, where (also) emotions do matter. It is interesting to note that such assessment is well in line with a resurrecting interest towards the intent element, as increasingly shown by recent contributions. Intent is one of the most challenging profiles to be considered when dealing with an antitrust infringement, and it may be agreed that the complexity of its proof and evaluation may have been detrimental for several antitrust cases in the past. However, we believe to be not too far from truth when considering that, more than the alleged poor intent’s assessment score, it was precisely its genuine psychological texture what pressured PNEA supporters to marginalize it. Yet, at least due to the fact that within US and other major jurisdictions antitrust infringements do have a criminal relevance, it should be properly kept in mind that “[T]he existence of a mens rea is the rule of, rather than the exception to, the principles of Anglo-American criminal jurisprudence”; therefore, “[I]ntent generally remains an indispensable element of a criminal offense. This is as true in a sophis-
ticated criminal antitrust case as in one involving any other criminal offense.70 When considering this statement, we come as no surprise to the conclusion that antitrust policy and enforcement should not discard the intent assessment too easily (as well as the related hot docs that, as we saw earlier, may cross the stage of an antitrust proceedings). In fact, the inner reason of a conduct may well be considered irrational according to PNEA assumptions, but at the same time may be considered rational according to a broader cognitive approach, thus reaching a legitimate relevance in order to understand subjective goals and strategy, as well as the objective structure of the offense.71 This is also, by the way, what can be quite openly found within EU antitrust, specifically in cases related to predatory conducts.72 Moreover, it has already been considered the possibility to refine an intent approach where the well-proven recurrence of a firm’s willingness to manipulate competitors or consumers behaviour by intentionally exploiting their cognitive bias will represent a first-stage assessment of the conduct’s antitrust relevance:73 such an application tool may be advisably strengthened by some levers related to the same intent’s relevance.74 Should this revision be successful, we will hopefully experience what is not a simple (and not needed at all) revival of an unreliable approach to antitrust conducts driven by folk psychology that supports unmanageable irrationality assumptions, but instead a useful change, cognitive-oriented, in the way real behaviours are assessed: all this is in order to catch more of that real-life complexity we all experience, that has been so far sacrificed on the altar of an axiomatic, simplistic predictability.

5. Some Conclusions

In the previous pages, we tried to briefly sketch a possible scenario of a cognitive-oriented antitrust, taking advantage from the big move already experienced along this line by the contemporary economic thought – where the PNE standard of a perfectly rational agent has been severely called into question since the rise of the behavioural approach – and according to an emerging trend also recurring within legal studies. Following such a remarkable convergence of social science towards a common model of “perfectly human” (or at least more human) agent, there seems to be no reason why antitrust should not revise its models of agents and conduct.

We are not so naive to think that such a cultural (and even ideological) change will happen fast and quietly, first of all because of the natural resistance usually opposed by the legal enforcers to new and more complex approaches, although the relatively rapid emergence of data-driven economic analysis as a standard of proof in front of the major antitrust agencies seems to mitigate the conservative prejudices we may have on the topic (the real issue being, then, how data are interpreted).75 In any case, if it may be rather doubtful that we will ever see the recurrence within an antitrust proceedings of functional magnetic resonance and other biomedical imaging paraphernalia related to cognitive neuroscience evidence (as, on the contrary, it is already happening within Criminal courts worldwide),76 it is a whole different issue whether this same evidence may be used from a general standpoint in order to better understand relevant conducts and consequently deal with them on a case-by-case basis. In fact, in front of an established tradition of PNEA assumptions built upon an “as if” approach, vigorously applied for inserting real behaviours into a narrow set of abstract rationality categories and excluding from legal relevance what does not fit with it, it appears that a pragmatically oriented approach to the same behaviours, driven by a broader knowledge of the human decision processes and a broader consideration of behavioural-psychological elements as enlightened by cognitive science, will be a definite move further towards a better fine-tuned legal theory and practice. Again, as at the beginning of this article, it would be another story: yet, a very intriguing one.

Bibliography


71. Merging the present discussion about intent with the previous one related to the utility of a broader cognitive, evolutionary-oriented approach to human behaviours, it is interesting to read the position recently adopted by a commentator, according to which “The reasons that jurors have been “impressed” by evidence of predatory intent is that such evidence strikes deep evolutionary chords. On the other hand, the so-called rational Chicago/Harvard economic models that eschew fairness and intent lack meaningful biological, evolutionary, or historical foundations. Consequently, we should welcome evidence and information about the motivations and intentions that lie behind the actions of dominant firms and monopolists. We should allow antitrust jurists to assess such evidence fully in judging predatory behavior” (Horton 2012, p. 655).

72. According to Petit & Neyrinck 2010, p. 10, the European Court of Justice has “[r]epeatedly held that the reason for the prohibition of predatory pricing lies in the fact that pricing below-costs is wholly irrational conduct, which can only be motivated by exclusionary intent. In other words, what matters is the mindset, and motives, of dominant firms, not their economic ability to exclude”.

73. This is in line with what recently proposed by Osti 2009, p. 404.

74. See Stucke 2012a, p. 855.

75. See Ginsburg & Fraser 2010.

76. For a general, updated survey, see Spranger 2012, p. 1 et seq.


