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TRANSGRESSING THE BOUNDARIES  
TOWARDS A TRANSFORMATIVE HERMENEUTICS OF  
BEHAVIORAL ECONOMICS

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## The promise of behavioral economics in the public imagination

From 2008, enter any bookshop of a reasonable size and you will find a well stocked shelf of titles on economics and the crisis. In contemporary publishing houses the division that edits these volumes is the ‘business and management’ section, and as a McGraw-Hill executive explains: ‘We see a lot of opportunity in this climate in publishing books that help managers get through difficult times, present lessons learned from the economic crisis and offer insights into business sectors that will grow as a result of [government policy].’ The teachings offered by this class can be grouped into five themes: sustainability, design, talent, simplicity and decision making (Danford 2009). It is under the latter category that we find the best selling titles: *Nudge*, *Sway*, *Predictably Irrational*, *Freakonomics*, and *Blink*. Their selling pitch is that they educate the business-minded mass public on a new economics of behavior.

From the standpoint of erudite journalism and professional economics, the new science of decision making has a disciplinary pedigree as ‘behav-

ioral economics’. Its genealogy has been constructed by practitioner and historian alike, as a long and august lineage (Camerer and Lowenstein 2004, Heukelom 2009). Yet, its currency in today’s popular, semi-popular and professional literature is not explained by its past achievements but by the appeal of behavioral economics as an alternative to a disreputable economics mainstream. Examples of these expectations can be found at the *New Yorker* magazine. John Cassidy explained in October 2009 that ‘The Great Crunch wasn’t just an indictment of Wall Street; it was a failure of economic analysis. From the late nineteen-nineties onward, the Fed stubbornly refused to recognize that speculative bubbles encourage the spread of rationally irrational behavior’. The author followed that piece with a new blog named ‘Rational Irrationality’ and in his book *How Markets Fail* has sought to blend Keynesian doctrine with the behavioral literature.<sup>1</sup> Others at the magazine are on the same trail. In a profile of books on decision making we read that ‘actual economic life, as opposed to the theoretical version, is full of miscalculations, from the gallon jar of mayonnaise purchased at spectacular savings to the billions of dollars Americans will spend this year to service their credit-card debt. The real mystery, it could be argued, isn’t why we make so many poor economic choices but why we persist in accepting economic theory.’ (Kolber 2008) And on the side of contemporary policy, the magazine reports that the debate gripping the Obama administration is a feud between a traditional sort of thinking championed by Lawrence Summers, and the budget division which Peter Orszag heads as a ‘behavioral economics think tank.’ (Lizza 2009) Orszag is the better man, and in the behavioral lies the way of the future.<sup>2</sup>

A cartel of book publishers and journalists agree that behavioral economics can save economics from itself. Economists are more measured in their assessment. Practitioners invested in the approach have written against the use of behavioral economics as a policy panacea, since ‘it’s becoming clear that [it] is being asked to solve problems it wasn’t meant to address.’ They also object to the implication that it might one day replace traditional economic analysis, stating that behavioral economics ‘should complement, not substitute for, more substantive economic interventions.’ (Lowenstein and Ubel 2010) In this statement we find the program for professional reform most favored by the bulk of economists, which The

Economist has also endorsed in its polemical July 18th 2009 issue: to better integrate the disparate branches of the discipline.

From authority we learn that behavioral economics is a way forward only in incomplete and complementary terms. Controversially, journalists and popular writers persist in their endorsement. One response to this pattern might be to reassert the credentials of economists speaking for the science and damn the rest for their ignorance. However, that would be to ignore the fact that the crisis of economics is not principally one diagnosed by its practitioners but announced by everyone else. (Most famously, the Queen of England inaugurating a new building at the London School of Economics, in November 2008, asked economists about the financial collapse: ‘Why did nobody notice it?!’). Hence, engagement with the crisis of economics should not be bounded by academic script and should probe the public’s anxiety and dissatisfaction. Taking lay (and royal) views seriously, the problem posed by this essay is to ask: why has behavioral economics been so fascinating at this time of failing public credibility of economics? The answer will advance our understanding of economics’ public crisis.

The immediate explanation gleaned from the pages of *The New Yorker* is that behavioral economics promises to be ‘humanizing’. We read that ‘What we most value in other people, after all, has little to do with the values of economics. (Who wants a friend or a lover who is too precise a calculator?). Some of the same experiments that demonstrate people’s weak-mindedness also reveal, to use a quaint term, their humanity.’ (Kolbert 2008). In the book *Nudge*, the authors separate the world between the econs and the humans. The former being those coached to act under rules of rational cost benefit, a small and pitiful breed that walks among us (Thaler and Sunstein 2008). This focus is shared on both sides of the Atlantic. UK economist and journalist Diane Coyle (2007, p. 118) is also writing on ‘humanizing economics’. She argues that the current dialogue with psychological research is ‘restoring morality to economic debate’. Such statements convey the expectation that the behavioral movement in economics will elaborate on a flawed and emotional individual to replace the dull automaton that inhabits mainstream economic theory.

The peculiar ‘economics science wars’

My strategy for this essay is unconventional. A frontal attack on the question would imply probing the prejudices of journalists and other behavioral cheerleaders. Another reasonable strategy would be a methodological assessment of behavioral economics.<sup>3</sup> But because the public conversation has been primarily about research futures, I will approach the topic imaginatively. The text of reference that I will examine and that constitutes the interpretative centerpiece of this essay is fictional and my own.

The reason why I approach the subject in such a contorted way is that we lack a documented record of the representations of economics and its status and labors in our culture. The field of science studies, for all its focus on the social, has largely excluded from its sights the social sciences, economics included.<sup>4</sup> Because of this neglect, economics has been the subject of an elusive variation on the science wars (see Weintraub 2009). Contrary to the science wars of the natural sciences, it has lacked the drama of contending public intellectuals, and the fanfare of jousting over the virtue of academia. Economists have also discovered unqualified or prejudiced analysts (not all postmodern) that they quickly dismiss. But these are methodologists, philosophers and historians that too often have offices down the same corridor as the economists themselves. As a consequence, conversation has largely remained enclosed by seminar walls and coffee encounters, evading print and the urgings of Arjo Klamer and Deirdre McCloskey (Klamer 2007).

As an historian I cannot employ my craft without a record. But for once I will not be deterred, I will invent the evidence.

The Sokal hoax as grammar

Although not its starting salvo, an honour that is deserved by Paul Gross and Norman Levitt’s *Higher Superstition*, Alan D. Sokal’s 1996 article in the journal *Social Text* brought the science wars to its most farcical mo-

ment. Sokal, a physicist at New York University, submitted ‘Transgressing the Boundaries: Toward a Transformative Hermeneutics of Quantum Gravity’ purporting to make connections between cultural/science studies literatures and new trends in physics. The article was loaded with over-generous analogies and unsubstantiated statements. Sokal saw himself performing an experiment, and certainly for him a ‘crucial experiment’ that forever damned postmodern commentary on science. He hoped to demonstrate that because his jargon-littered and erroneous piece could pass by the scrutiny of postmodern editors, all postmodern text was nothing but error and pose.

For all its deception and intended absurdity, Sokal’s text was grammatical. The author explained its structure as:

‘First, I quote some controversial philosophical pronouncements of Heisenberg and Bohr, and assert (without argument) that quantum physics is profoundly consonant with “postmodernist epistemology”. Next, I assemble a pastiche – Derrida and general relativity, Lacan and topology, Irigaray and quantum gravity – held together by vague rhetoric about “nonlinearity”, “flux” and “interconnectedness”. Finally, I jump (again without argument) to the assertion that “postmodern science” has abolished the concept of objective reality. Nowhere in all of this is there anything resembling a logical sequence of thought; one finds only citations of authority, plays on words, strained analogies, and bold assertions.’ (Sokal 1996b).

The essay was a juxtaposition of cultural studies writings and concepts from physics and mathematics. Sokal, in his confession, labours to disassemble the overlaps, having booby-trapped the text with allusions to fringe theories in physics of no credibility. Sokal’s efforts to explain himself, to undermine his own text, suggest that he had produced a plausible piece. It was plausible to the editors who read him as someone ‘seek[ing] some kind of affirmation from postmodern philosophy for developments in his field.’ (Robbins and Ross 1996) But it was plausible also at an analytical level, as Arkady Plotnitsky (2002) and others have shown, some of the claims that Sokal borrows and that the latter labels as non-sense, are defensible. Lacan and Derrida do shed philosophical insight into mathemat-

ics and science but in terms which should not ‘infring[e] on the disciplinary specificity of the latter.’

However ill-meant, the Sokal hoax has become a much analyzed, debated, and I dare say, ‘cherished’ classic.<sup>5</sup> A piece that once carefully evaluated, once judged for its excesses, is not without imagination and opportunity. Importantly for my purposes, Sokal simulates a ‘transgression of the boundaries’ of fields of expertise, intimating loose connections between science and its cultural valence and circulation. Despite himself, Sokal has advanced the study of science’s public meanings and the conversation between the ‘two cultures’ (see for instance Labinger and Collins 2001).

My assignment

Economics has had no Sokal affair, lacking any piece comparable in daring and poisonous imagination.<sup>6</sup> The vitality of Sokal’s text is its ability to be a sign for so many disparate and unstable readings. I think it appropriate to use that text’s grammar to address a disparate and unstable subject, the expectations surrounding behavioral economics. Strip the Sokal essay from its contextual baggage: a debate on the strategies for the academic left, and an indictment on continental philosophy, and we have a usable template. My essay assignment, not unlike those handed to students in a classroom, is: Rewrite Sokal (1996) as if Sokal was a behavioral economist.

My purpose is to follow the language of behavioral economics, liberally quoting and reinterpreting precursors and latest trends, to project the futures of the approach. I expect my reader to be discomforted by my statements but willing to give them the benefit of the doubt, recognizing in it some measure of plausibility. In the final section of this essay I acknowledge that many of my claims are indeed untenable. By imagining the limits of behavioral economics I hope to reveal where lies for the lay reader, not constrained by the rules of academic authority and argument, the promise of a new economics.

If the Sokal piece is self-described as a ‘pastiche’ or imitation of postmodern literature to imagine the possibilities of a postmodern physics, mine is the imitation of the imitation, to imagine a postmodern economics. I rehearse two sections of Sokal’s text in an ‘economics edition’. ‘Quantum mechanics: Uncertainty, Complementarity, Discontinuity and Interconnectedness’ will become ‘Procedural rationality: Complexity, Satisfying and Contingency’. Like Sokal I use this section to draw a genealogy of current research. Following the canonical accounts, Herbert Simon is selected as the author that began the re-examination of cognition in economics. ‘Quantum gravity: String, Wave, or Morphogenetic Field’ will become ‘Behavioral Economics: Irrational, Emotional, or Neural Field’. The critical section in the hoax is where one is invited to interpret the latest trends in research, marginal approaches are offered as dominant and their insights projected beyond disciplinary boundaries. I preserve the structure of Sokal’s sections, looking for quotes where he has placed quotes, keeping to the size of his paragraphs, and sentences, keeping even as much of the original text as I can. I however will not load the text with footnotes as the Sokal original. After the extracts I conclude by briefly discussing my fantasy. I seek to identify what transgressions behavioral economics is promising us.

## Extract 1: Procedural rationality: Complexity, Satisfying and Contingency

It is not my intention to enter here into the extensive debate on the conceptual foundations of decision theory. Suffice it to say that anyone who has seriously studied the subject will assent to Herbert Simon’s reasonable (pardon the pun) summary of his celebrated principle of procedural rationality:

‘the capacity of the human mind for formulating and solving complex problems is very small compared with the size of the problems whose solution is required for objectively rational behavior in the real world – or even for a reasonable approximation to such objective rationality’. (Simon 1957, 198)

We must give an account not only of substantive rationality – the extent to which appropriate courses of action are chosen – but also procedural rationality – the effectiveness, in light of human cognitive powers and limitations, of the procedures used to choose actions. As economics moves out to situations of increased cognitive complexity, it becomes increasingly concerned with the ability of actors to cope with the complexity (Simon 1978, 9).

Along the same lines, we arrive at the insight that ‘the apparent complexity of our behavior over time is largely a reflection of the complexity of the environment in which we find ourselves’ (Simon 1996, 80). Stanley Aronowitz (1988, 340) has convincingly argued that ‘all relations with this world are mediated by material and social structures’ and that the view of unmediated reason and knowledge is an ideology that draws ‘its inspiration from the bourgeois protest against capitalism’.

A second important aspect of decision theory is its principle of satisfying. When is one to say that an action is rational or optimal? This is the recognition that few real life situations will afford programs of action that meet both standards, and by implication that all knowledge is local. Satisfying

‘is one of the most general and effective means of attaining heuristic power with modest amounts of computation. The fundamental reason for its effectiveness is that it does not require the comparison of all possible solutions with each other, but only the comparison of each possible solution, as it is generated, with a standard.’ (Simon 1977, p.173)

There are profound connections between satisfying and a critical reconsideration of the place of man within nature and its environment, which has been expressed in such later work as Daly (1997) and Kim et al (2000).

A third aspect of procedural rationality is contingency or framing: as Tversky and Kahneman and (1981, p. 547) explain.

‘If while traveling in a mountain range you notice that the apparent relative height of mountain peaks varies with your vantage point, you will conclude that some impressions of relative height must be erroneous,

even when you have no access to the correct answer. Similarly, one may discover that the relative attractiveness of options varies when the same decision problem is framed in different ways. (...) The susceptibility to perspective effects is of special concern in the domain of decision-making because of the absence of objective standards such as the true height of mountains.'

Finally, an elaboration of these principles is the impetus behind 'prospect theory' an elaboration that shows that decision is displaced by observation and in turn displaced by the act of observation. As Kahneman and Tversky (1979, 275) formalize it, decision operates in two stages: 'The editing phase consists of a preliminary analysis of the offered prospects, which often yields a simpler representation of these prospects. In the second phase the edited prospects are evaluated and the prospect of the highest value is chosen.'(my emphasis) This vision is a radical reevaluation of our mechanistic conceptions of reason, objectivity, and optimality, and suggests an alternative worldview in which our knowledge of the universe is characterized by contingency and human representation.

## Extract 2: Behavioral Economics: Irrational, Emotional, or Neural field

However, this interpretation, while adequate within classical decision theory, becomes incomplete within the emerging postmodern view of behavioral economics. When even the neural field - biology incarnate - becomes a social space, how can the classical interpretation of reason as an independent variable be sustained? Now not only the observer, but the very concept of cognition, becomes relational and contextual.

The synthesis of decision theory and behavioral science is thus the central unsolved problem of theoretical economics; no one today can predict with confidence what will be the language and ontology, much less the content, of this synthesis, when and if it comes. It is, nevertheless, useful to examine historically the metaphors and imagery that theoretical and experimental economists have employed in their attempts to understand behavior.

The earliest attempts, dating back to the early 1980's, sought to name the limits of cognition and portrayed it as 'biases': the outcomes of subjective probability and perception with a topology of interconnected mnemonic and decision rules (Kahneman, Slovic and Tversky 1982). But economists and psychologists alike were unable to carry this approach further, perhaps because of the inadequate development at that time of experimental and neuro-imaging protocols (see below).

In the 1990's economists continued this program in an even more conventional approach: simplify the phenomenon by classifying it into various brands of 'effects', pretending that they are almost rational, and then apply the standard methods of utility maximization to adjusted decision rules. But this method, too, failed: it turned out that 'presence of an endowment effect [and one could add others] frustrates common interpretations of indifference curves and makes cost/benefit analysis illegitimate' (List 2004, p. 624). This means that the behavioral patterns one observes are intrinsic to a new theory; any attempt to pretend that the standard microeconomics can accommodate them is simply self-contradictory. (This is not surprising: the almost-linear approach complicates and destroys the most characteristic features of neoclassical economics, such as optimality.)

In the late 1990's a very different approach became popular: here the fundamental constituents of decision became not the cognitive limits of subjective calculation but the very social fabric (Singer and Fehr 2005). In this view, reason does not exist as a calculative process but rather decision is at its core relational, an act binding the decision-maker and its social environment! Many enthusiasts of behavioral economics believe that they are closing in on a Theory of Everything - although in most professional venues they will show more modesty (Fehr and Gächter 1998). But the formalization difficulties are formidable, and it is far from clear that they will be resolved any time soon.

Finally, an exciting proposal has been taking shape over the past few years in the hands of an interdisciplinary collaboration of economists, psychologists and neuroscientists: this is neuroeconomics. Since the early 2000's evidence has been accumulating that this field, the use of functional

neuro-imaging to study decision making, can bring to the fore new layers of interconnection between the human and the artifactual: (a) brain mapping and geographical mapping, the human and the natural, are shown to have similar topographies; (b) the neural network is itself a statistical map, and responsive to choices in standardization, yet another site of framing; (c) the brain has been shown to be infinitely modular and plastic. All three properties are characteristic of a new conception of cognition; and it was proved some years ago that the biases and effects reported in the work of prospect theorists have neural counterparts (see review in Camerer, Loewenstein, Prelec 2005). Thus, neuroeconomics is a fulfillment of Simon and Kahneman and Tversky's decision theory. Until recently this theory has been deemed out of the bounds of the high theory economics establishment, which has traditionally resented the encroachment of biologists (not to mention psychologists) on its 'turf.' However, some theoretical economists have recently begun to give this theory a hearing, and there are good prospects for progress in the near future (Camerer, Loewenstein, Prelec 2004).

It is still too soon to say whether homo reciprocans, or neuroeconomics will be confirmed beyond the laboratory: the field experiments, in contrast to the laboratory ones, are not easy to perform. But it is intriguing that all theories have similar conceptual characteristics: contingency and fallibility of choice, regard for others, and a stress on the overlapping topology between the human and the artifactual.

Transgressing the Boundaries: Toward a Liberatory Economics?

What have I learned from my assignment? I replaced Herbert Simon, Daniel Kahneman and Amos Tversky for Heisenberg and Bohr, which mangles a careful history of behavioral economics but that helps me highlight how these early writings were preoccupied by the uncertainty and unreliability of cognition. The second extract was much harder to compose. I could only write it after deciding that Sokal's cooperative quantum gravity was to become the equally cooperative and similarly fringe neuroeconomics. I could then construct backwards a sequence of behavioral

writings, relying on the role of emotions and reciprocity/justice as driver for human decision making.

My extracts, like Sokal's original, are plausible, but only that. As in the way of the original a second reading reveals many (too many) obstacles. For instance, while I quote Stanley Aronowitz's *Science and Power*, I am aware that a few pages down from my choice quote (p. 349) he blasts at those scholars that seek to explain irrational behavior and examine its reasons and its 'system'. An indictment that applies to psychiatry but also behavioral economics (of all sorts) with its rhetoric of conservative experimentalism and reductionism (Mäki 2010). Economists would object to nearly all that has been said. Entering the behavioral laboratory, economists are not looking to hybridize knowledge nor seeking cooperative ventures as I claimed. Their first intuition, as accords the sociology of academic professions (Abbott 1988), is to compete. So economists will differentiate themselves from psychology even as they learn from it, as in the representative statement that 'I really like the strong theoretical emphasis of economics and our desire for unifying explanations. It distinguishes us a lot from biologists and psychologists, and provides us with a normative anchor' (Fehr in Rosser, Rosser, Holt and Colander, 2010, p. 73). For economists it is mandatory that boundaries are not transgressed and that exchange between disciplines be well regulated.

For all its implausibility, I learned from my Sokal pastiche. Pursuing the humanizing clue, I argue, perhaps discover, that the excitement around behavioral economics lies in its treatment of agency. This is a science of mistakes (biases, effects) which offers us a tortured contrast with an ideal of pure, perfect reason which we have wished for ourselves and our societies. Reluctantly we are invited to abandon substantive rationality for a far distant second best: procedural reasoning. And as economics appears to fold itself into the personal and the flawed, it turns sentimental. It tells us that feelings of justice and regard for the other are deeply rooted in our intimate cognition. At the same time, the impulses that warm our hearts and light our brains are the reason for all errors that pollute and complicate our collective lives. Financial crisis included.

What is less apparent in my extracts, but which I learned as I opportunistically harvested for quotes, is the cyborg character of behavioral economics. Less the hyper-rational cyborg of the Cold War (Mirowski 2002) but a seemingly more empowering and optimistic version (closer to Haraway 1991). Descriptions of behavioral economics research, and notably in their popular versions, are packed by contraptions, deceptions and games, computer screens, PET and MRI scanners, drugs with too many consonants, and lots and lots of lotteries. However classical and Hobbesian, behavioral economics's sentimental view of the self is made thoroughly contemporary because of the machinery. In our gadget-filled worlds, we might take comfort in the belief that the artifactual might have something to say about your most intimate thoughts and structures, and can, one day, enhance our choices.

The crisis of economics did not emerge in the first months of the financial crisis. It came into full view some two years later, in 2009, and the voices of popular discontent have only increased since then. A final imaginative hypothesis is that the transition from economic crisis to crisis of economics has been triggered by a public recognition and enthusiasm for a new science of the personal and the private. My simulation of a 'behavioral Sokal' imagines a new economics that transgresses the rationality that economists have elected for their agent models. My suggestion is that economics's failing credibility is tied to a popular belief that there is no order or reason in our economies and in our decisions. The public fantasizes for an economic science that represents our insecurities about the choices we make, our feelings, our flaws.

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<sup>1</sup> In the same vein see Akerlof and Shiller (2010) and Fox (2009).

<sup>2</sup> James Surowiecki, the *New Yorker* financial pages writer, seems less enthusiastic. His commentary is more eclectic and nuanced.

<sup>3</sup> An engagement that might follow the leads set out in the June 2010 themed issue of the *Journal of Economic Methodology*.

<sup>4</sup> The statement ought to be qualified by making note of the recent literature on 'performativity'. (Mackenzie et al 2007; Mackenzie 2008). Also see Hands (2001) for a comprehensive effort to connect science studies literature to the analysis of economics, and Fourcade (2009) as a notable exception, although one not coming from science studies.

<sup>5</sup> Concerning the ethics of Sokal's actions, I share the views expressed by Stanley Fish in the *New York Times*, May 21, 1996, 'Professor Sokal's Bad Joke'.

<sup>6</sup> Not that economics has not had its parodies, but they are designed for light entertainment (Leijonhufvud 1971, Blinder 1974, Covick 1974). I thank Roger Backhouse for these references.