

Debate “Pros and Cons for mindless economics”

with Aldo Rustichini (Pro) and Wolfgang Pesendorfer (Con).

(organized by Rosemarie Nagel, UPF and ICREA)

On Friday, 26th of May 2006, **Aldo Rustichini (NY University)** and Wolfgang Pesendorfer (Princeton) on "**Pros and Cons for mindless economics**". The debate is inspired by the paper "The case for mindless economics" by Faruk Gul and Wolfgang Pesendorfer.

Abstract: "The case for mindless economics" (by Faruk Gul and Wolfgang Pesendorfer).

Neuroeconomics proposes radical changes in the methods of economics. This essay discusses the proposed changes in methodology, together with the neuroeconomic critique of standard economics. We do not assess the contributions or promise of neuroeconomic research. Rather, we offer a response to the neuroeconomic critique of standard economics.

Aldo Rustichini will represent his point of view of a neuro-economist and Wolfgang Pesendorfer his point of view of a “standard” economist.

In order to warm up the audience about neuro- economics, Aldo will give a talk on neuro economics before the debate.

Program:

10:00-11:30: talk on “Neuro-economics” by Aldo Rustichini

11:30-12:00: Coffee break

Debate:

12:00-12:20: opening statement by Wolfgang Pesendorfer

12:20-12:40: opening statement by Aldo Rustichini

12:40-13:30: discussion

Both the lecture and the debate will be in UPF, aula 40213, Roger de Lluria – Building. In order to encourage a lively discussion also from the audience, I attach the paper mentioned above (by Faruk Gul and Wolfgang Pesendorfer) and several short papers by Aldo Rustichini.

Some afterthoughts after the debate:

The debate inspired a long series of questions. Unfortunately we did not record neither the debate nor the questions but only the names of people who asked questions. Therefore a day later we asked all those to send us their questions. We received several messages of those questions which are stated in the following pages. The answers are in our memory but not written (yet).

Some of the questions raised during the debate:

Roberto Weber (CMU):

As for the question for Aldo: It seems that a lot of the resistance you are facing among some economists is the critique that "neuroscience is not economics." However, in the talk you gave today, a lot of what you presented rested on self-reported affect data, which has been widely used for a long time outside of economics, mainly by psychologists, but as a research method is one that few economists are willing to embrace. Do you think this hurts your argument? That is, by relying on this data do you believe that you are opening yourself up to methodological criticisms that would have less strength if you only relied on "hard" (e.g., neuron-imaging, physiological) data?

Question: It seems like most of your arguments against neuroeconomics are essentially of two kinds.

First, you argue that several of the existing studies deal with topics that lie outside of the scope of economics. But you also point to some studies that deal with issues that you admit are economic, but that these studies just are not very convincing or have not been conducted well enough to rule out alternative explanations or theories. The question, then, is whether you could envision such a study being carried out in a way that was informative for economics and up to the standards of being convincing enough to merit attention by economists? That is, given that by your own admission there are neurobiological studies that address economic issues -- just not well enough to be convincing -- do you find it impossible to imagine that one might be conducted in a way that is convincing. To give you an example, suppose that the study you mentioned on testing the beta-delta discounting hypothesis actually ruled out enough alternative theories to really shed some light on the kind of discounting process people used (perhaps by measuring intensity of activation of different regions), would this not be convincing? Would it not be an example of a valuable neuroeconomic study?

Answer

1: My recollection is that Wolfgang answered that yes, such a study is imaginable, and that he won't deny the possibility that neuroeconomics *could* be valuable for economics, but that it just isn't there yet.

My follow up question was then:

Question 2: If you believe there is a possibility of a subfield that is valuable for economics, is it not valuable to pursue such an endeavor to see if it turns out to be so?

Answer 2: He answered that he didn't see its valuable right now, and that he didn't see a clear path to how it could become such a useful subfield. (This part is really hazy in my memory).

Matthew Ellman (UPF)

I should comment that talking with a number of people after the debate, we would have been interested to hear **Wolfgang and Aldo** debate the implications for welfare economics, which they chose to omit. Perhaps in the written exchange, a brief note on this would be a good idea?

Responding to **Wolfgang's** comment that economists should stick to the domain of aggregate phenomena, because economists will never be able to improve on a "marketing" (or psychology) expert's ability to predict individual choice behaviour, I suggested that traditionally economists have argued that their tools are less context-dependent. So, at least in predicting behaviour in a new context where insufficient data has been available, the marketing expert might not have the ideal tools to make good predictions. Psychology and economics might therefore complement each other in generating theories of individual decision-making that provide enough structure to extrapolate from a range of contexts where data is available into the new context.

Jose Apesteguia (UPF)

Question for **Aldo**:

Do you believe that an economic theory or model can be falsified or justified by means only of brain activation data?

Zeynep Gurguc (grad student UPF)

By the way, the question that I have asked during the seminar to **Pesendorfer** was: You argue that your definition of neuroeconomics is not only limited to research that makes specific reference to neuroscience but it also refers to research that combines psychology and economics. You criticize some work within your definition of neuroeconomics. However, in the discussion, you have suggested that Prospect Theory and some other research which specifically relates psychology and economics were fruitful. So, I would like to know what is exactly the scope of the research that you are criticizing.

One question that I had in mind for **Pesendorfer** but did not ask was: As far as I understood, you argue that individual decisions or emotional processes are not relevant to the analysis which is required for aggregation, and policy making. However, any microfounded theory takes into account individual decisions and analyze policy implications. Do you think a microfounded theory that takes into account well-defined emotional processes would not help policy makers?

Salvador Barbara (Universitat Autònoma de Barcelona):

My question was about the status of random utility theory as a possible framework where to integrate standard economic considerations with others coming from psychology (or neural evidence). After all, random utility is an important construct for psychologists and it has also provided the basis for the work of those economists/econometricians who have actually, really, tried to predict choice behavior (I refer to people like McFadden and to

techniques like probit or tobit models). I was actually worried not to have formulated this question more clearly, because I'd like to learn from the answer.

My comment was about rethorics, and the dangers of dismissing standard approaches in order to enhance the importance of new developments. I used the example of an old controversy between Cambridge, England and Cambridge, MA, regarding uses and misuses of the concept of aggregate capital. England was right on a specific point, but those who made it did overblow its importance to the point of dismissing standard economics at large. This ended up in a fiasco, because of excessive claims. As a result, many graduate students in England, especially Italians, missed the chance to have a thorough education in economics and ended up working in a relatively marginal field. This was just a warning, especially to young researchers. No need to claim general revolutions: economics is large enough to encompass progress in specific areas and remain essentially untouched in others.

Tim Witting (UPF):

- 1) I agree with your assertion that economics is about making predictions in the aggregate and not the individual level, but don't you think it is logically inconsistent to say that we couldn't better be able to understand the aggregate by understanding the sum of its parts, the individual agents. These are the objectives of the application of Neuroscience, Psychology, etc.
- 2) You say that Neureconomics hasn't been an aid in validating or rejecting economic theories. You say it is "very interesting but just not applicable to economics". This is not supported by the record; here is an example. Neuroscience research indicates that people receive three times as many negative pings proportional to the amount of positive pings when declaring losses in contrast to declaring profits. This evidence supports a theory which was originally a psychological domain but has morphed into mainstream economics, prospect theory. So here we have an economic theory validated by the use of neuroscience, exactly counter to what you have said today. As an aside, you also say that the use of psychology is not relevant to the application of economic theory; this example also disproves that claim, as prospect theory tore down many of the underpinning classical economic foundations, showing that people perceive gains/losses asymmetrically and act predictably 'irrational' in the aggregate. This is what I intended on saying, but unfortunately because of a barrage of interruptions, time limitations, and a slight slip of the tongue mis-stating something, I did not get my point across successfully. It is really a shame, because rarely is there such a clear-cut, open and shut case as this with the Neuro-economics debate; the pro-'mindless' economics position should have been DISPROVED within under 2 minutes, instead of leaving the attendees mind with an air of ambivalence regarding the position.

Robin Hogarth (UPF):

How does the arrival of "neuroeconomics" into the mainstream of economics differ from what we have already observed with experimental economics and behavioral economics? Why have the latter been accepted? What do you predict for neuroeconomics and why?

Marc Lemenestrel (UPF)

My question to **Wolfgang** was: "Why being defensive? It is not clear that neuroeconomics constitutes a threat to economics." At lunch, another question also to Wolfgang was:

"Don't you think that neuroeconomics can strengthen the scientific foundations of economics?"

And to **Aldo**: "What would be the key aspects of the 'grand theory' you evoke and that would reunify economics and psychology?"

Rosemarie Nagel (UPF)

To **Aldo**:

What is a unified theory and a scientific revolution with respect to advances in neuroeconomics to economics.

Why should there be a radical change through neuro-economics on economics while experimental /behavioral economics coincides quite well within or parallel to economics

Antonio Calvo

(**To WP**) From a methodological viewpoint, is it pertinent to criticize the methodological foundations of a whole research field (here, neuroeconomics) by commenting on a handful of selected quotes from selected papers which (the papers and/or the quotes) may themselves be subject to debate within this developing field rather than fully representative of it?

(**To AR**) Under the premise that research in neuroeconomics ends up mapping accurately neural activity to determinants of behavior some day in the future, and given a possible misuse of this knowledge by malevolent third parties (e.g., to promote eugenics discourses or practices), shouldn't the issue of the moral responsibility of the scientist be addressed here explicitly, and possibly backed up by some surveillance committee?