Fairness & Reciprocity
Recall, Homo economicus:
1. optimally maximizes expected utility
2. selfish & v/0 emotion
3. indifferent to others' utility

This approach has yielded fantastic insight, but...
Recall, **Homo economicus**

1. optimally maximizes expected utility
2. selfish & w/o emotion
3. indifferent to others' utility

\[ \text{Do people really behave like H.E.?} \]
Crazy traffic jam in India

https://www.youtube.com/watch?v=iElk3RpV6RA
1987 Stock Market Crash

https://mrtopstep.com
I am biased

Yes, in some ways people do behave as Homo Economicus.

People do have interdependent preferences & emotions.

But behave "rationally" relative to these.
How does policy change behavior?
Daycare pick up time example:

The problem: parents pick up their kids late!
Daycare pick up time example:

The problem: parents pick up their kids late!

Daycare centers fine the parents for being tardy.
Daycare pick up time example: The problem: parents pick up their kids late.

Daycare centers fine the parents for being tardy.

Parents pick up kids even later!

Behavior is justified b/c they are "paying".
A FINE IS A PRICE

URI GNEEZY and ALDO RUSTICHINI*

ABSTRACT

The deterrence hypothesis predicts that the introduction of a penalty that leaves everything else unchanged will reduce the occurrence of the behavior subject to the fine. We present the result of a field study in a group of day-care centers that contradicts this prediction. Parents used to arrive late to collect their children, forcing a teacher to stay after closing time. We introduced a monetary fine for late-coming parents. As a result, the number of late-coming parents increased significantly. After the fine was removed no reduction occurred. We argue that penalties are usually introduced into an incomplete contract, social or private. They may change the information that agents have, and therefore the effect on behavior may be opposite of that expected. If this is true, the deterrence hypothesis loses its predictive strength, since the clause “everything else is left unchanged” might be hard to satisfy.

Figure 1.—Average number of late-coming parents, per week

The fine was just the cost of child care.
Where else do we see this behavior?

- UCSD parking fines ⇒ cost of parking

  ↑ ± 0 students using handicap permits

  ↑ ± 0 organizations/students w/ "A" permits
Airline infant safety seat rule could cause more deaths than it prevents, pediatricians say

October 13, 2003

A proposed Federal Aviation Administration (FAA) regulation that would require infant restraint seats for children under age two would likely lead to more deaths in automobile crashes than the deaths prevented in air crashes, say pediatricians from the University of California, San Francisco and the University of Washington.

Current regulations allow children under two to ride free in a parent’s lap. With the new regulation, these children would need their own tickets for their own seats and seatbelts. In a new analysis, researchers estimate that if the extra cost of buying airline tickets for the young children led only 5 to 10 percent of families to drive rather than fly, the projected increase in highway deaths would exceed the number of airplane crash deaths prevented. This is because the possible number of deaths that could be prevented with airline safety seats is low—approximately four deaths in 10 years—because airplane travel is very safe, and because the majority of airplane crash deaths occur in crashes in which there are no survivors, according to the researchers.

Even when deaths caused by diversion to car travel are not counted, the estimated cost to save one infant’s life with an airplane seat was high. If the average round-trip ticket cost $200, the cost would be $1.3 billion per life saved. “Many more lives could be saved by spending this money on other safety measures,” said UCSF pediatrician Thomas Newman, MD, MPH, lead author of the study.

The analysis was published in the October 14, 2003 issue of the Journal of the American Medical Association. Newman is Professor of Epidemiology and Biostatistics and Pediatrics at UCSF and a pediatrician at UCSF Children’s Hospital. His co-authors are Brian D. Johnston, MD, MPH, and David C. Grossman, MD, MPH of the Harborview Injury Prevention and Research Center and the Department of Pediatrics at the University of Washington, Seattle.

“The story of even a single young child dying in an airplane crash, whose death could have been prevented with a safety seat, makes all of us want to do something to keep such a tragedy from happening again,” Newman said. “Unfortunately, in this case these well-meaning efforts could backfire.”

Health Care Industry

How can neuroeconomics inform policy?
NBER WORKING PAPER SERIES

BEHAVIORAL ECONOMICS AND HEALTH ECONOMICS

Richard G. Frank

Working Paper 10881
http://www.nber.org/papers/w10881

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
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Physicians are highly educated and skilled professionals that are motivated to serve their patients to improve their health and well-being. They are also frequently in positions where they face great clinical uncertainty and must persuade patients to pursue one clinical course over others. Physicians have been shown to be creatures of habit in making medical choices, and are slow to adopt new practices and technologies that would improve the quality of care and in turn their patients’ health (Institute of Medicine 2001). Specifically, a series of studies have shown that in treating conditions like Otitis Media, Diabetes, Depression, and Asthma physicians regularly depart from evidence based practice (Institute of Medicine, 2001; Appendix A). This runs counter to what one might expect from market models that assume either profit maximization or maximization of a physician objective function that might include patient health benefits and income as arguments.

Physicians tend to rely on the drugs that they know – and shy away from using newer drugs or generic formulations.

I need to choose my physician and health care options.

There is so much information out there... what is one to do?

Patients are more comfortable with physicians they are familiar with – and trust – not necessarily the best one for their care needs.

Patients make decisions based on advice from family and friends – not really relevant to the best outcome for their care needs.

How to get rid of the BIAS?

* BIAS does not \( \downarrow \downarrow \) with increased experience.

Why??

- Limited time frame
- Unaware of own biases
- Bias awareness tends not to generalize

Frank (2004)
POLICY - ideas?

1. more information is not helpful
2. how to counteract biases & inertia?
3. could we force the patient population to become better informed? Flexible?

FRANK (2004)
THE POTENTIAL ROLE OF REGRET IN THE PHYSICIAN–PATIENT RELATIONSHIP: INSIGHTS FROM NEUROECONOMICS

Giorgio Coricelli

Purpose – The aim of the chapter is to show how two important facts of physicians’ behavior, (i) their tendency to “create” the demand for medical practices, and (ii) their delay and reluctance in using new treatments and therapies, can be explained with the lens of the neuroeconomics research on the neural and behavioral basis of regret.

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Physician behavior analysis

- Why do physicians tend to induce the demand for medical practices?
- Why are physicians reluctant to introduce new treatments and new therapies?

Responsibility for consequences of our choices

- Consequences of our choices – important for decision-making.
- Especially true, when the decision involves the well-being of others.
- Compare alternative choices (counterfactual mental processes)
- Counterfactuals generate an emotional response.
- Prefer not to know the outcome of the rejected option

Consequences of our choices – important for decision-making.
Especially true, when the decision involves the well-being of others.

Compare alternative choices (counterfactual mental processes)
Counterfactuals generate an emotional response.
Prefer not to know the outcome of the rejected option

"It would have been better if I had..."

Disappointment emotion

We tend to avoid circumstances with intense negative emotions

Regret results from a decision made and the possibility to compare the obtained outcome with better outcomes of rejected alternatives.

Here we suggest, with the support of neuroeconomics findings, that regret aversion is a good predictor of physicians’ behavior. The studies on the neural basis of regret show the involvement of a brain circuitry (orbitofrontal cortex, anterior cingulate, and temporal areas) in the experience and in the anticipation of this cognitive-based emotion. The orbitofrontal cortex is found to play an important role during the entire process of decision-making in contexts where regret might arise. This particular portion of the prefrontal cortex integrates cognitive and emotional components of decision-making. Results from a recent neuroimaging study (Coricelli et al., 2005) demonstrate how the activity of the regret circuitry is found only when the experimental subject is actually an agent, meaning that he/she is actually taking a decision. It is not activated when the subject is merely following the choice of another agent (the patient). We use this result to suggest that physicians actually play as agent when they are taking decisions that might primarily have consequences for the future of their patients. With this interpretation, we can reconcile apparently contradictory facts of the physicians’ behavior, such as their tendency to offer more than the optimal level of standard practices and less than the optimal level of innovative therapies. Thus, we suggest that these less-than-rational medical choices are made in order to avoid the prospect of future regret.