



7º TALLER BRAINVESTOR

Experimentando los sesgos

Cómo identificarlos y gestionarlos

Braininvestor

Junto con **Rafael López**
y **Paz Gómez Ferrer**

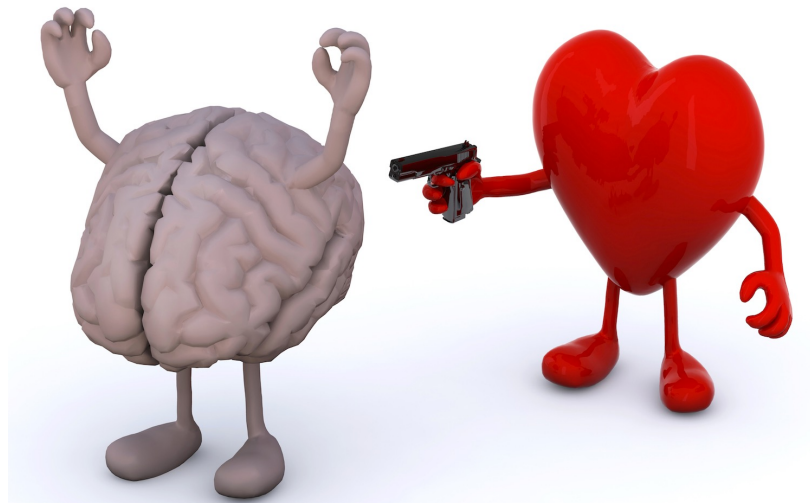
DESCARGA BRAINVESTOR **GRATIS**



iOS



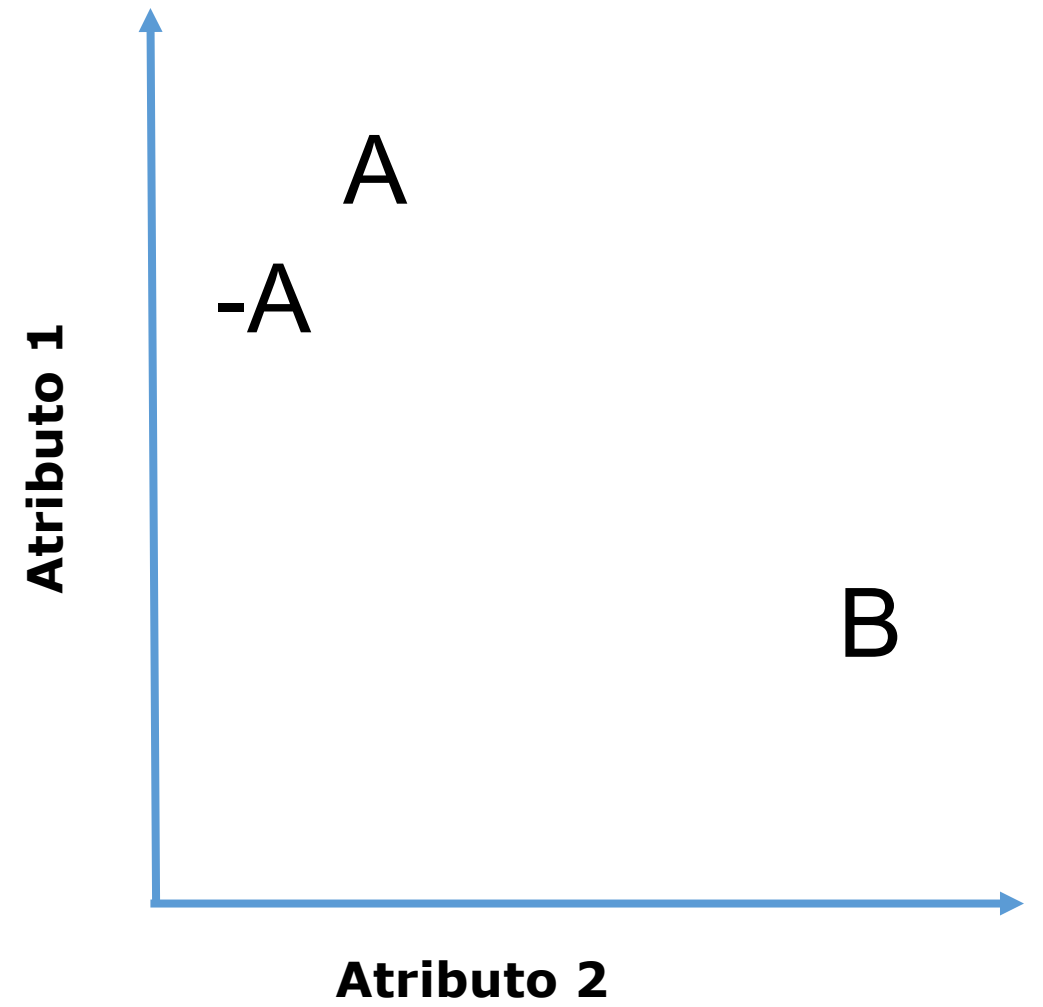
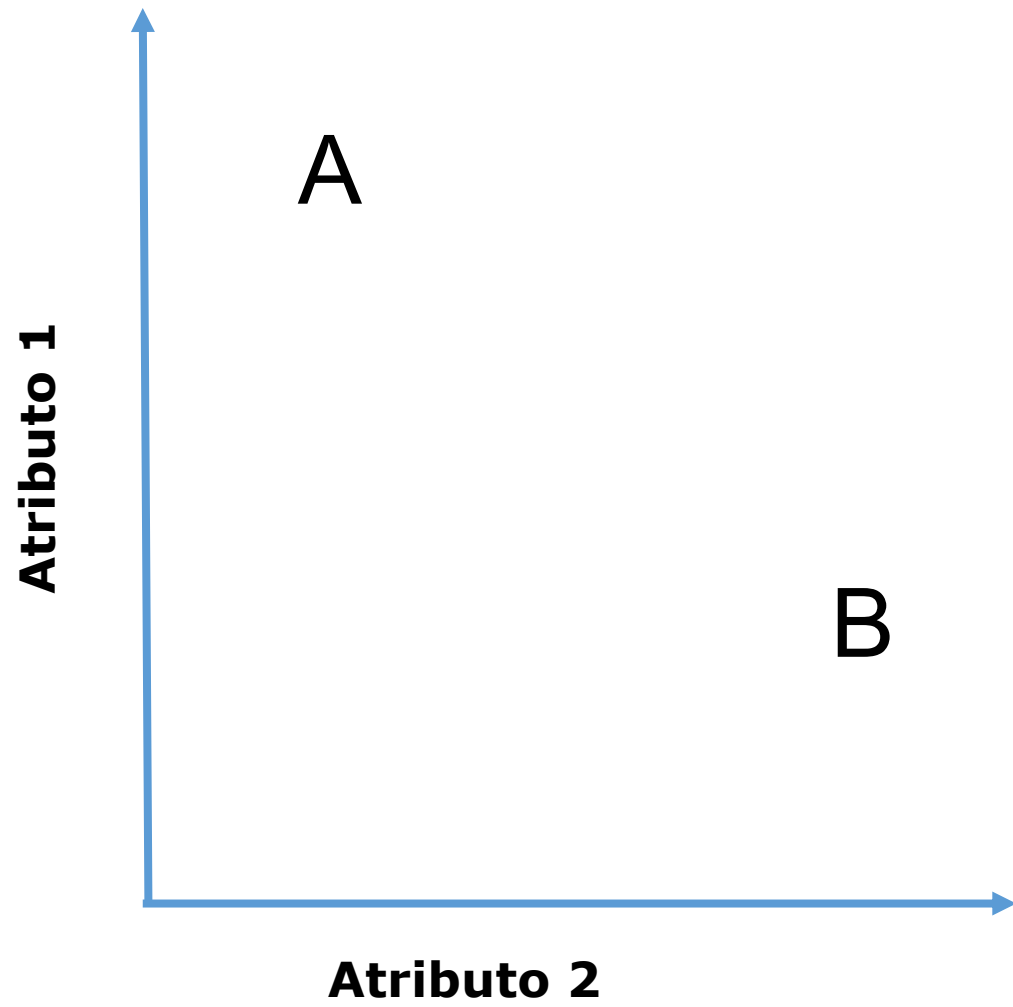
Android



Economía de la Conducta: experimentando los sesgos

Dr. Rafael López. Madrid, 2024









7€



3€



7€



6€



3€

Deciding Advantageously Before Knowing the Advantageous Strategy

Antoine Bechara, Hanna Damasio, Daniel Tranel,
Antonio R. Damasio*

Deciding advantageously in a complex situation is thought to require overt reasoning on declarative knowledge, namely, on facts pertaining to premises, options for action, and outcomes of actions that embody the pertinent previous experience. An alternative possibility was investigated: that overt reasoning is preceded by a nonconscious biasing step that uses neural systems other than those that support declarative knowledge. Normal participants and patients with prefrontal damage and decision-making defects performed a gambling task in which behavioral, psychophysiological, and self-account measures were obtained in parallel. Normals began to choose advantageously before they realized which strategy worked best, whereas prefrontal patients continued to choose disadvantageously even after they knew the correct strategy. Moreover, normals began to generate anticipatory skin conductance responses (SCRs) whenever they pondered a choice that turned out to be risky, before they knew explicitly that it was a risky choice, whereas patients never developed anticipatory SCRs, although some eventually realized which choices were risky. The results suggest that, in normal individuals, nonconscious biases guide behavior before conscious knowledge does. Without the help of such biases, overt knowledge may be insufficient to ensure advantageous behavior.

In a gambling task that simulates real-life decision-making in the way it factors uncertainty, rewards, and penalties, the players are given four decks of cards, a loan of \$2000

overall gain. The players have no way of predicting when a penalty will arise in a given deck, no way to calculate with precision the net gain or loss from each deck, and no

good decks versus the bad decks; (ii) SCRs generated before the selection of each card (2); and (iii) the subject's account of how they conceptualized the game and of the strategy they were using. The latter was assessed by interrupting the game briefly after each subject had made 20 card turns and had already encountered penalties, and asking the subject two questions: (i) "Tell me all you know about what is going on in this game." (ii) "Tell me how you feel about this game." The questions were repeated at 10-card intervals and the responses audiotaped.

After sampling all four decks, and before encountering any losses, subjects preferred decks A and B and did not generate significant anticipatory SCRs. We called this period pre-punishment. After encountering a few losses in decks A or B (usually by card 10), normal participants began to generate anticipatory SCRs to decks A and B. Yet by card 20, all indicated that they did not have a clue about what was going on. We called this period pre-hunch (Fig. 1). By about card 50, all normal participants began to express a "hunch" that decks A and B were riskier and all generated anticipatory SCRs whenever they pondered a choice from deck A or B. We called this period hunch. None of the patients generated anticipatory SCRs or expressed a "hunch" (Fig. 1). By card 80, every normal

Bechara A, Damasio H, Tranel D, Damasio AR. Deciding advantageously before knowing the advantageous strategy. *Science* 1997;275(5304):1293-5

Iowa Gambling Test



Deck 1



Deck 2



Deck 3



Deck 4

In this experiment, you will be asked to repeatedly select a card from one of the four decks above. You can select a card by clicking the mouse on one of decks.

With each card, you can win some money, but you can also lose some. Some decks will be more profitable than others. Try to choose cards from most profitable decks so that your total winnings will be as high as possible.

You will get 100 chances to select a card from the deck that you think will give you the highest winnings. Your total earnings and the number of cards selected will be displayed on screen.

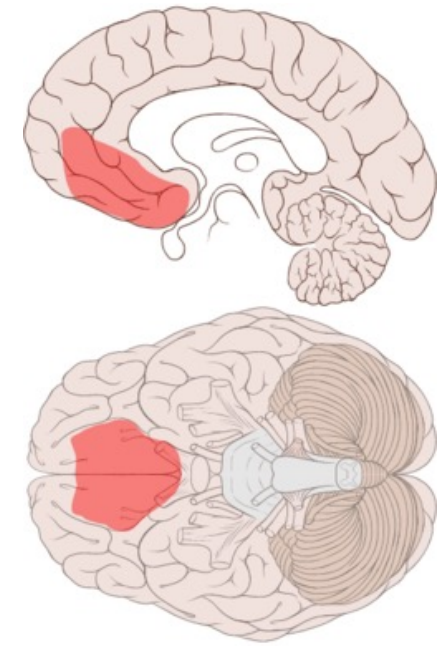
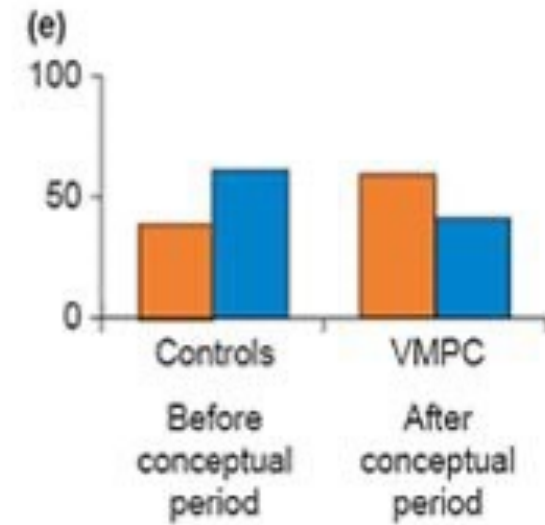
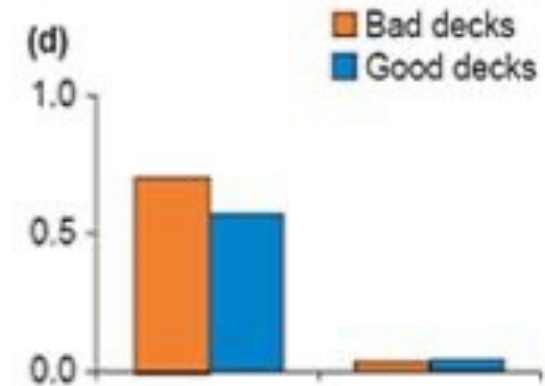
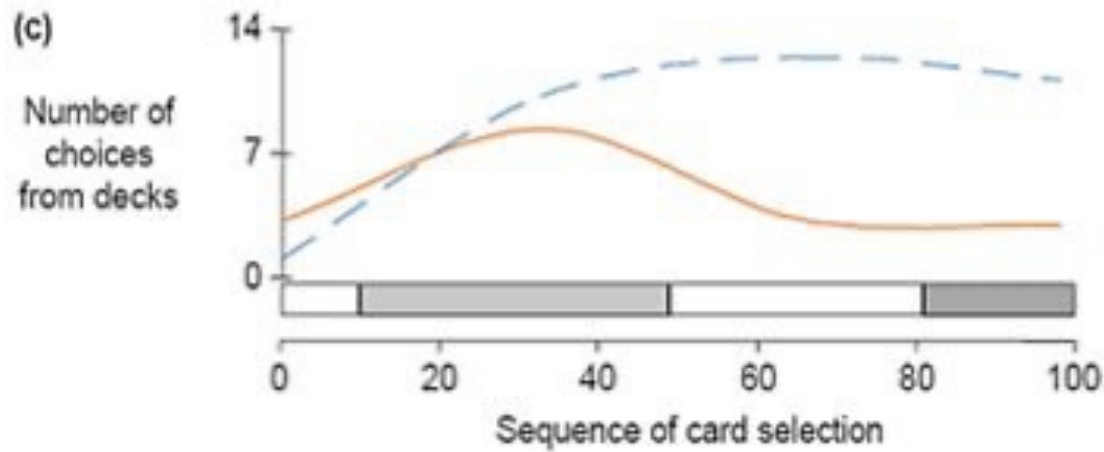
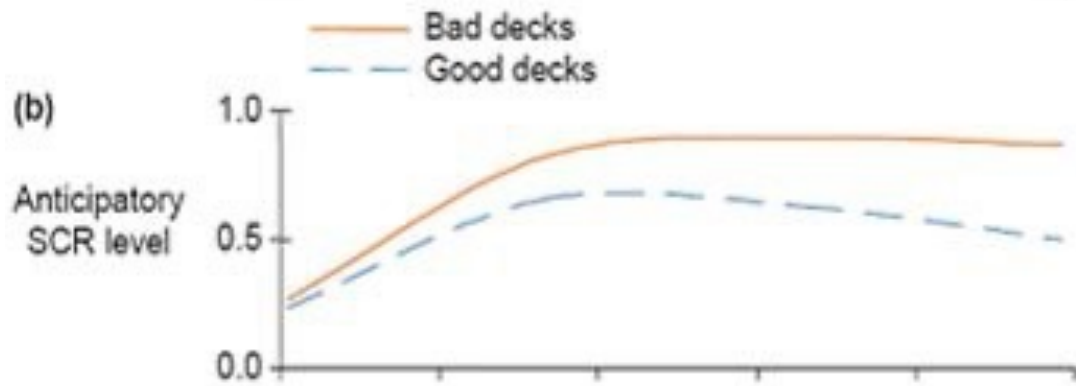
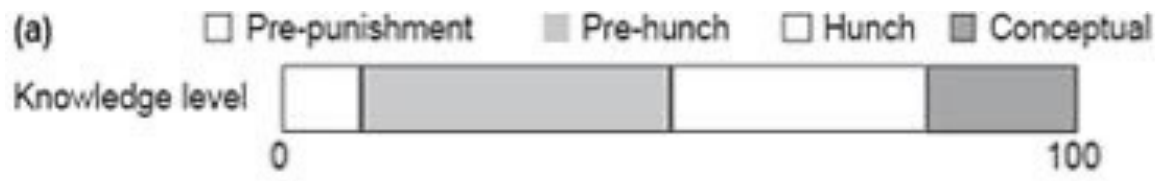
You start with \$2000. Click "Start" to begin.

The Iowa Gambling Task

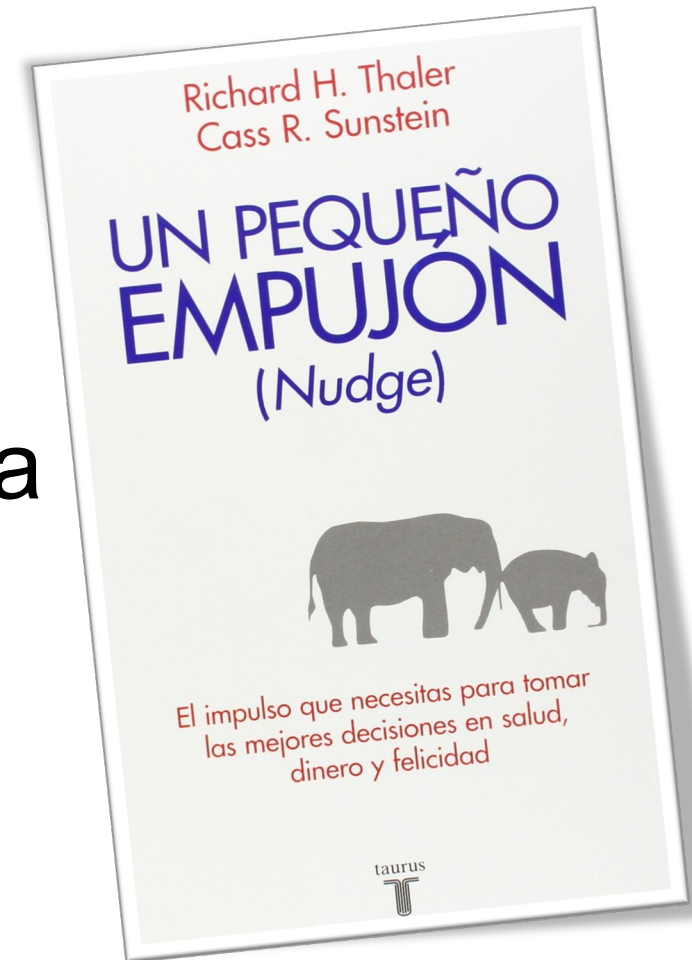
Bechara A, Damasio H, Tranel D and Damasio AR. The Iowa Gambling Task and the somatic marker hypothesis: some questions and answers. *TRENDS in Cognitive Sciences* 2005; 9 (4):159-162

	"Bad" decks		"Good" decks	
	A	B	C	D
Gain per card	\$100	\$100	\$50	\$50
Loss per 10 cards	\$1250	\$1250	\$250	\$250
Net per 10 cards	-\$250	-\$250	+\$250	+\$250

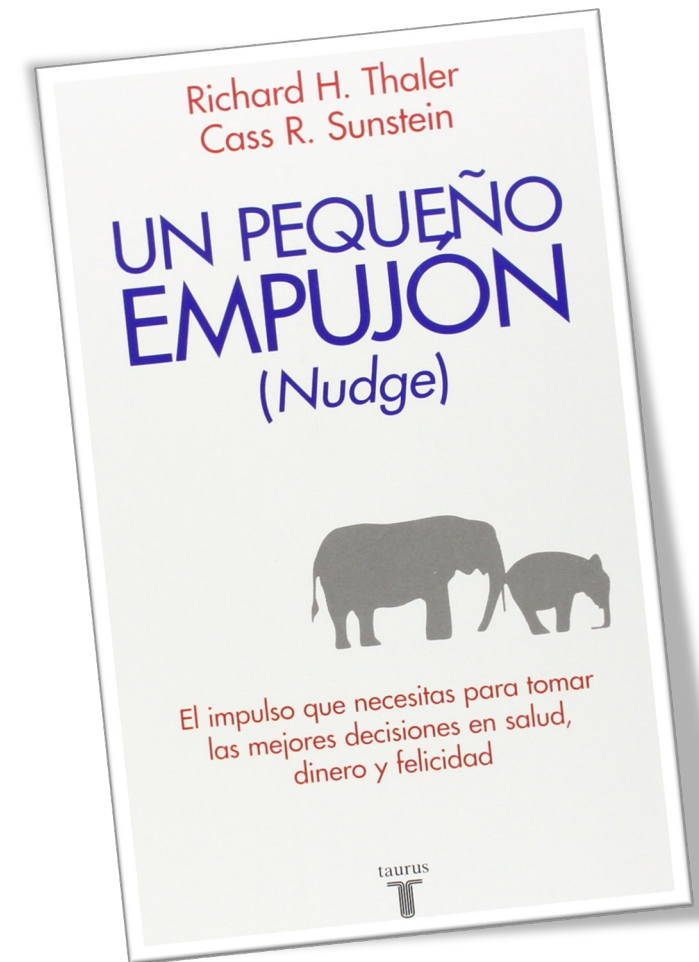
TRENDS in Cognitive Sciences

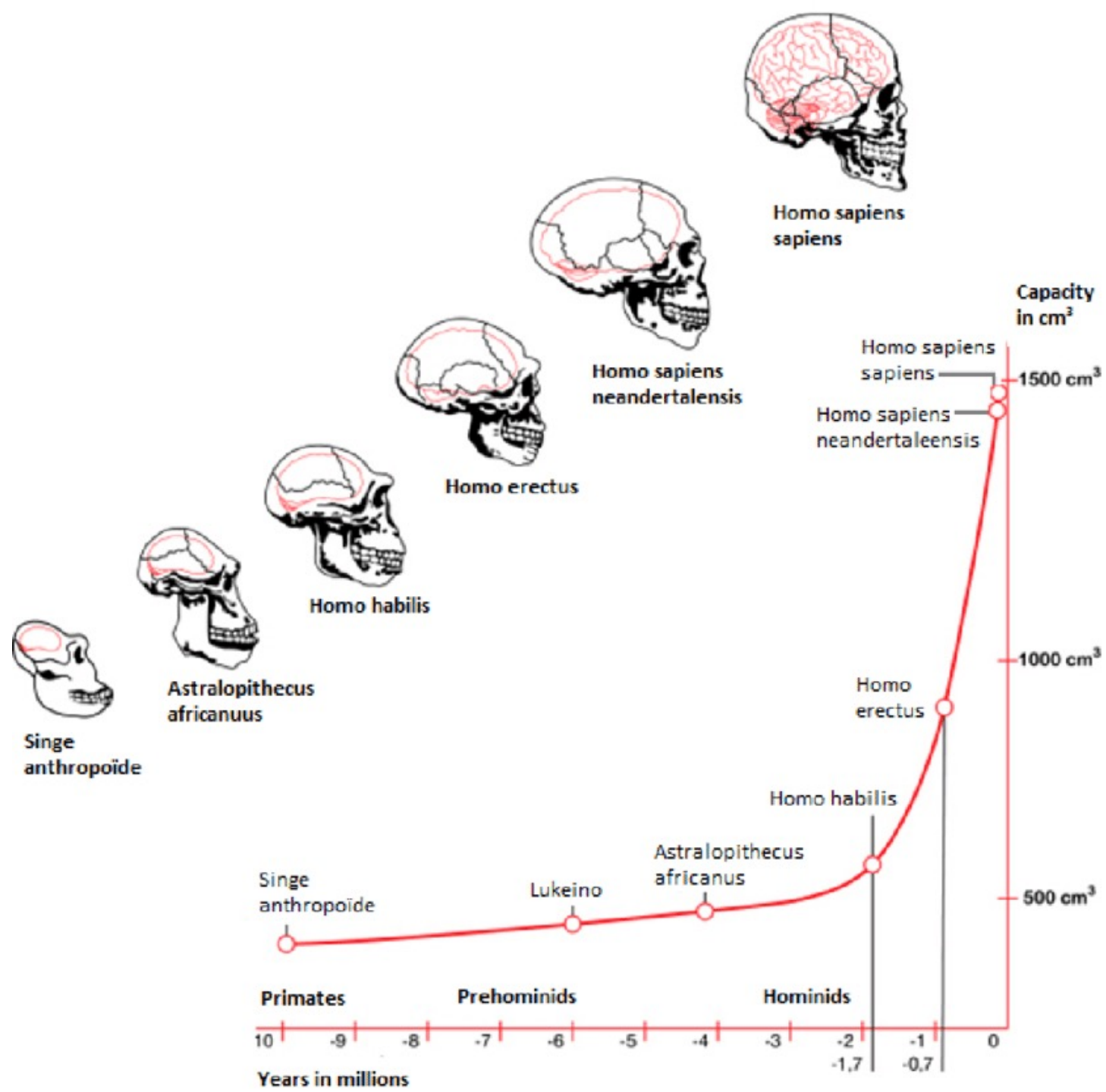


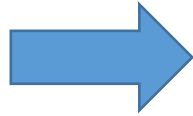
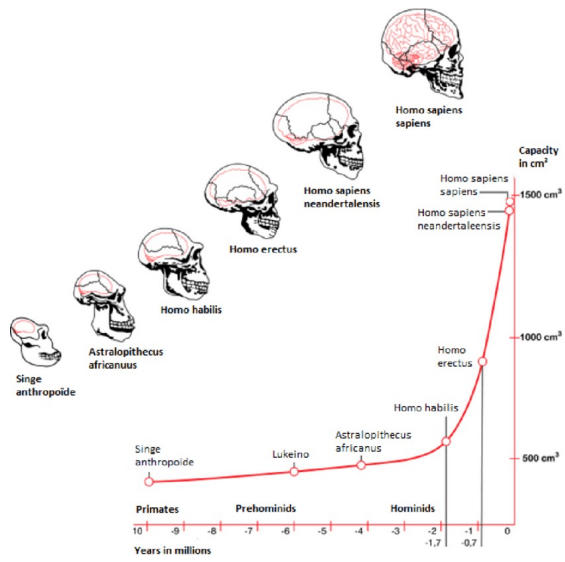
- Un bate y una bola cuestan 1,10 \$
- El bate cuesta 1,00\$ más que la bola
- ¿Cuánto cuesta la bola?



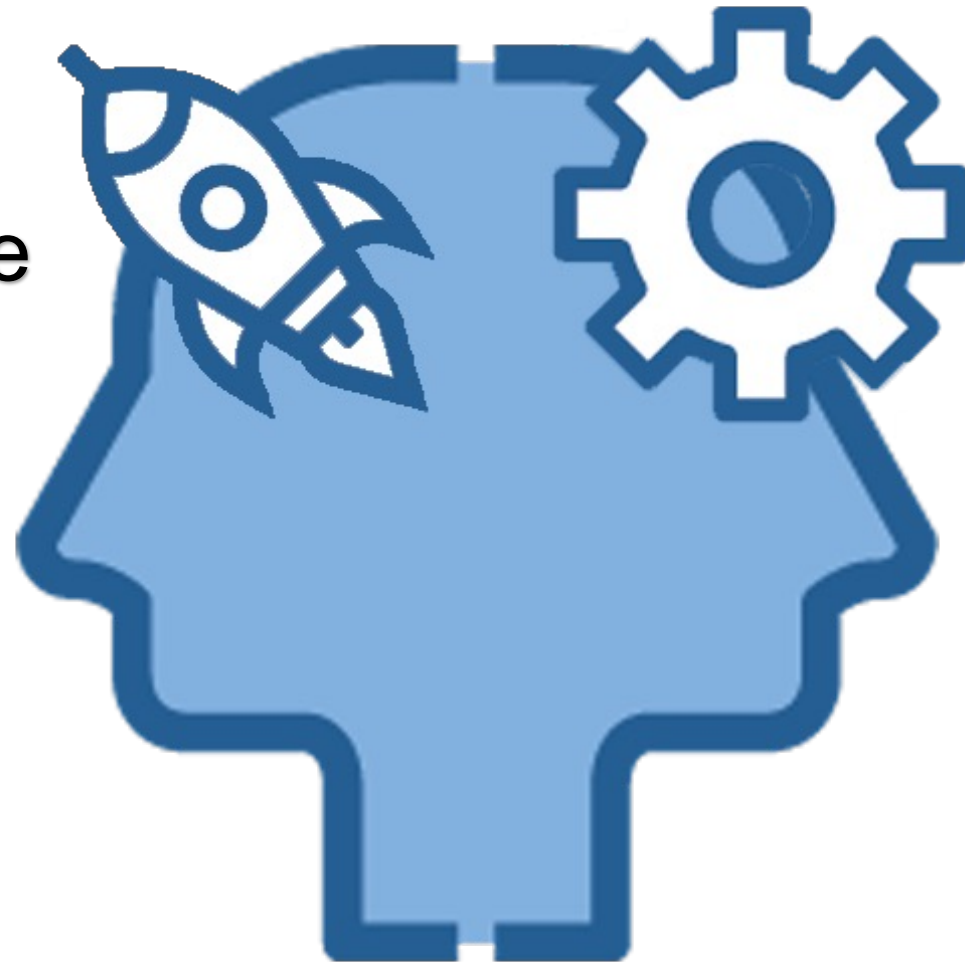
Si 5 máquinas tardan 5 minutos en fabricar 5 objetos, ¿cuánto tiempo tardarían 100 máquinas en fabricar 100 objetos?







10 millones de años
Vs.
195.000 años



Rápido



Lento



Inconsciente



Consciente



Automático



Con esfuerzo



Decisiones
rutinarias



Decisiones
complejas



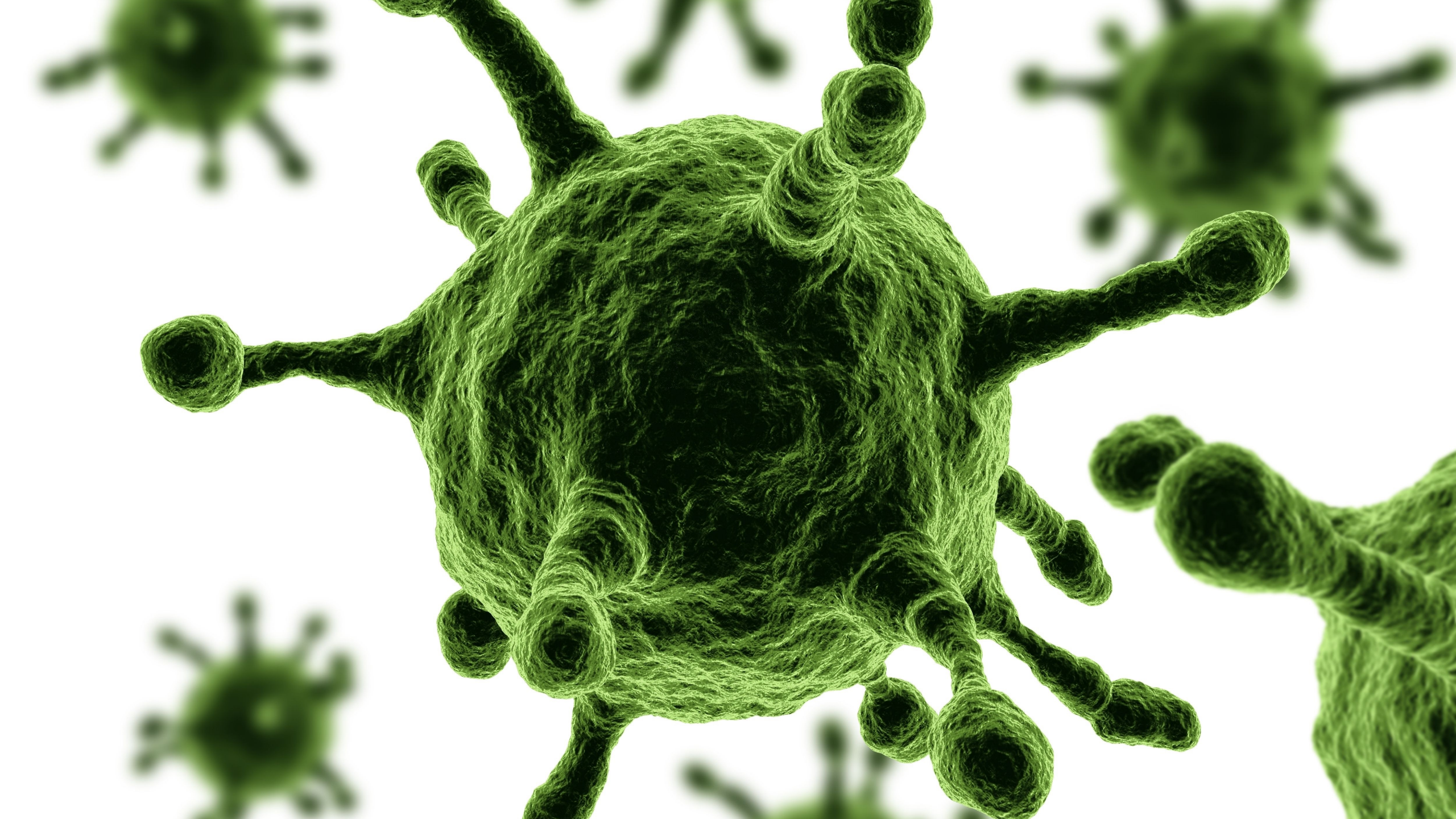
Propenso
al error



Preciso

A person wearing teal scrubs and gloves is holding a white metal case. The case has the text "HUMAN ORGAN FOR TRANSPLANT" printed on it in red. The background is a blurred hospital room with another person in teal scrubs and a patient on a gurney.

**HUMAN
ORGAN**
FOR TRANSPLANT



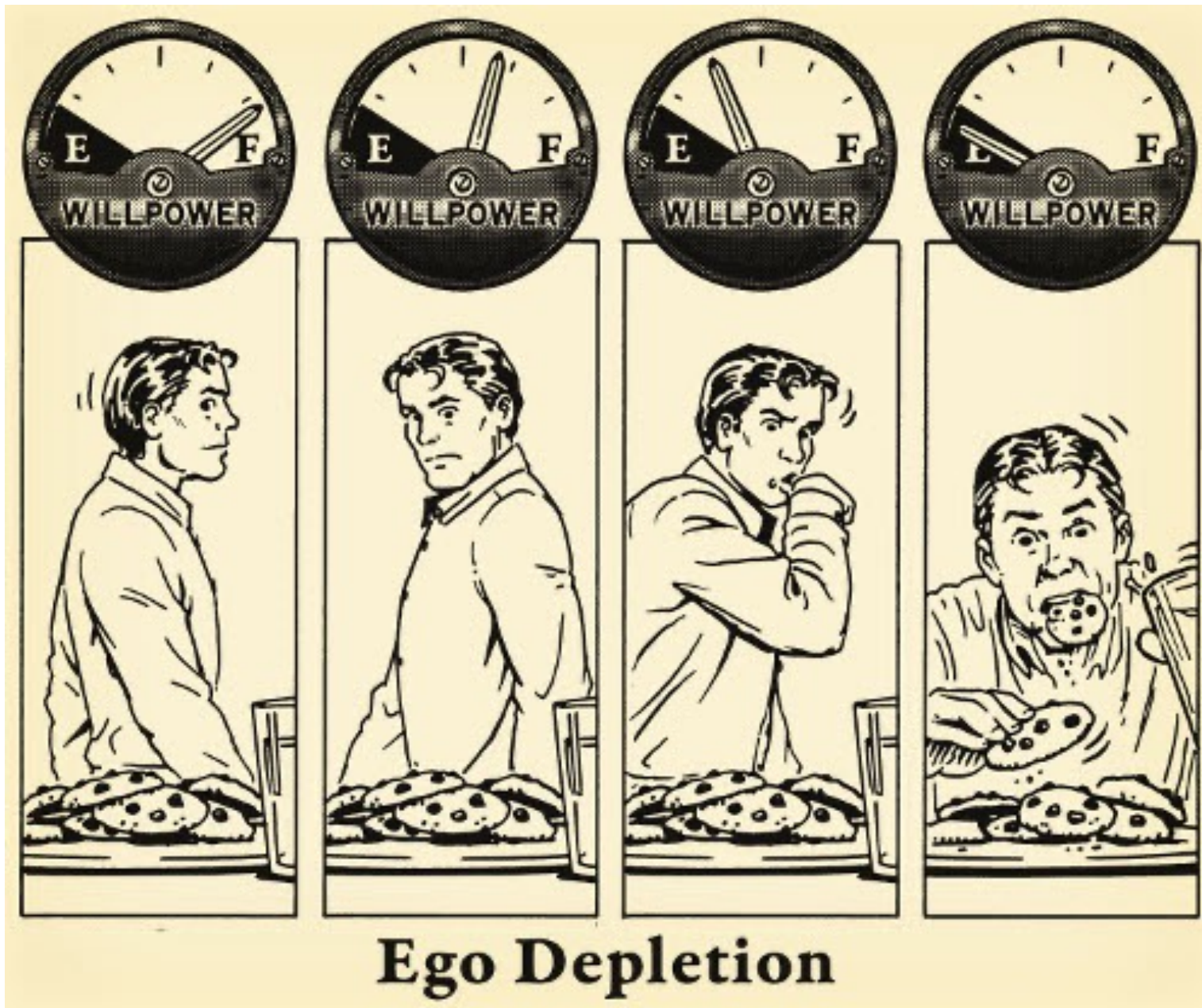
Ego Depletion: Is the Active Self a Limited Resource?

Roy F. Baumeister, Ellen Bratslavsky, Mark Muraven, and Dianne M. Tice
Case Western Reserve University

Choice, active response, self-regulation, and other volition may all draw on a common inner resource. In Experiment 1, people who forced themselves to eat radishes instead of tempting chocolates subsequently quit faster on unsolvable puzzles than people who had not had to exert self-control over eating. In Experiment 2, making a meaningful personal choice to perform attitude-relevant behavior caused a similar decrement in persistence. In Experiment 3, suppressing emotion led to a subsequent drop in performance of solvable anagrams. In Experiment 4, an initial task requiring high self-regulation made people more passive (i.e., more prone to favor the passive-response option). These results suggest that the self's capacity for active volition is limited and that a range of seemingly different, unrelated acts share a common resource.

Many crucial functions of the self involve volition: making choices and decisions, taking responsibility, initiating and inhibiting behavior, and making plans of action and carrying out those plans. The self exerts control over itself and over the external world. To be sure, not all human behavior involves planful or deliberate control by the self, and, in fact, recent work has shown that a great deal of human behavior is influenced by automatic or nonconscious processes (see Bargh, 1994, 1997). But undoubtedly some portion involves deliberate, conscious,

ego depletion, as a way of learning about the self's executive function. The core idea behind ego depletion is that the self's acts of volition draw on some limited resource, akin to strength or energy and that, therefore, one act of volition will have a detrimental impact on subsequent volition. We sought to show that a preliminary act of self-control in the form of resisting temptation (Experiment 1) or a preliminary act of choice and responsibility (Experiment 2) would undermine self-regulation in a subsequent, unrelated domain, namely persistence at a dif-



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The Valjean Effect: Visceral States and Cheating

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David Pizarro,
Cornell University

Dan Ariely, and
Duke University

James D. Weinberg
University of South Carolina

Extraneous factors in judicial decisions

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^aDepartment of Management, Ben Gurion University of the Negev, Beer Sheva 84105, Israel; and ^bColumbia Business School, Columbia University, New York, NY 10027

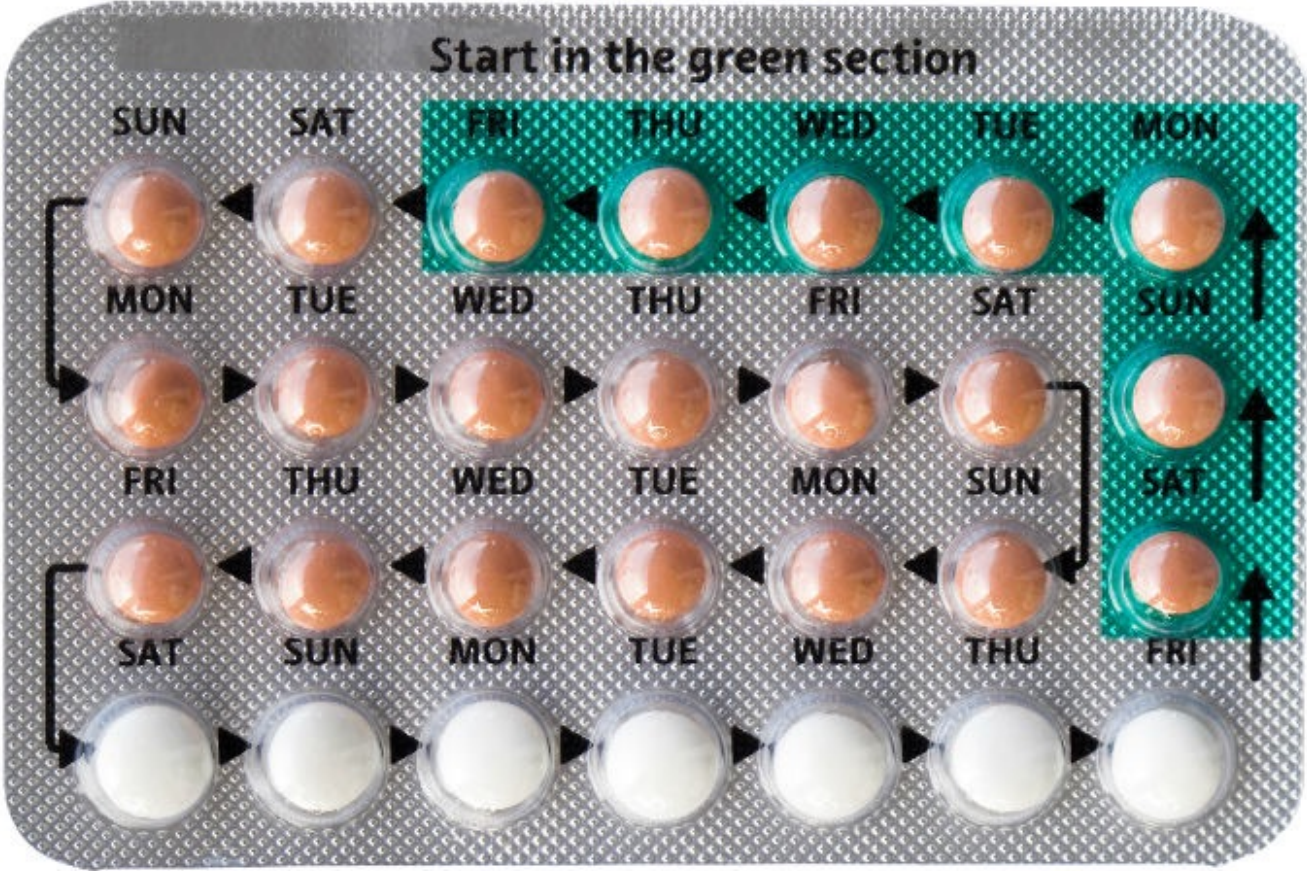
Edited* by Daniel Kahneman, Princeton University, Princeton, NJ, and approved February 25, 2011 (received for review December 8, 2010)

Are judicial rulings based solely on laws and facts? Legal formalism holds that judges apply legal reasons to the facts of a case in a rational, mechanical, and deliberative manner. In contrast, legal realists argue that the rational application of legal reasons does not sufficiently explain the decisions of judges and that psychological, political, and social factors influence judicial rulings. We test the common caricature of realism that justice is “what the judge ate for breakfast” in sequential parole decisions made by experienced judges. We record the judges’ two daily food breaks, which result in segmenting the deliberations of the day into three distinct “decision sessions.” We find that the percentage of favorable rulings drops gradually from $\approx 65\%$ to nearly zero within each decision session and returns abruptly to $\approx 65\%$ after a break. Our findings suggest that judicial rulings can be swayed by extraneous variables that should have no bearing on legal decisions.

decisionmaking | legal realism | mental depletion | expert decisionmaking | ego depletion

Does the outcome of legal cases depend solely on laws and facts? Legal formalism holds that judges apply legal reasons to the facts of a case in a rational, mechanical, and deliberative manner (1, 2). An alternative view of the law—encapsulated in the

(29.3%), 50 Jewish-Israeli females (4.5%), and 9 Arab-Israeli females (0.9%). The two parole boards process $\sim 40\%$ of all parole requests in the country. The prisons house felons convicted of crimes such as embezzlement, assault, theft, murder, and rape. Each parole board is composed of one judge, as well as a criminologist and a social worker who provide the judge with professional advice. For each day we obtained the entire set of rulings. The majority of the decisions in our sample (78.2%) consist of parole requests; the remainder consist of parolee requests to change the terms of their parole (e.g., a request to remove a tracking device) or requests by parole candidates to change the terms of their incarceration (e.g., a request for prison relocation). Our database includes the legal variables that appear in the case file: number of previous incarcerations, gravity of crime committed, months served, and whether a rehabilitation program would be available should the prisoner be granted parole (98.3% of prisoners had such a program in place). [A judge with 40 years of experience on the bench, two criminal attorneys, and two prison wardens with 10 years experience serving on the parole board, independently ordered the gravity of offense for the 7 classes of crimes committed. Ordering was identical for the five experts, and ranged from misdemeanor (1) to felony (7).] The judge was not provided these details in advance; the information was provided by a clerk only when the prisoner (and his or her attorney) appeared before the parole board. Every day a judge considered 14–35 cases (see *SI Materials and Methods, S1* for details) in succession ($M = 22.58$, $SD = 4.67$), and each case deliberation lasted ≈ 6 min ($M = 5.98$, $SD = 5.13$, $Max = 40.00$). Our data include the time





La recogida segregada puerta a puerta

- Diferentes fracciones de los residuos se recogen en días alternados en la misma puerta de los edificios.
- Los residuos no entregados correctamente no son recogidos y de este modo se facilita al máximo la separación en origen y se minimizan las actitudes poco participativas y a menudo incívicas.
- El sistema también repercute en un beneficio indirecto en espacio público y muy especialmente en limpieza de las calles.
- Como consecuencia, la recogida puerta a puerta obtiene unos niveles de participación muy elevados y unos resultados cuantitativos y cualitativos muy importantes.





LAS COLILLAS DE CIGARRILLO

Opción A



Nuestro Basurin

Opción B



Tu Orto

PERO NO LA TIRES AL JARDÍN

LETTER
TO THE CITIZENS

**PAY YOUR
TAX
ON TIME**

STANDARD LETTER

LETTER
TO THE CITIZENS

9/10

**PEOPLE PAY
THEIR TAX
ON TIME**

MODIFIED LETTER

A worker wearing a black cap and a black and orange shirt is sorting mail in a warehouse. The background shows rows of mail bins and a high ceiling with industrial lighting.

**LETTER
TO THE CITIZENS**

**PAY YOUR
TAX
ON TIME**

STANDARD LETTER

**LETTER
TO THE CITIZENS**

9/10

**PEOPLE WITH A
DEBT LIKE YOURS,
IN YOUR LOCAL
AREA, PAY THEIR
TAX ON TIME**

MODIFIED LETTER



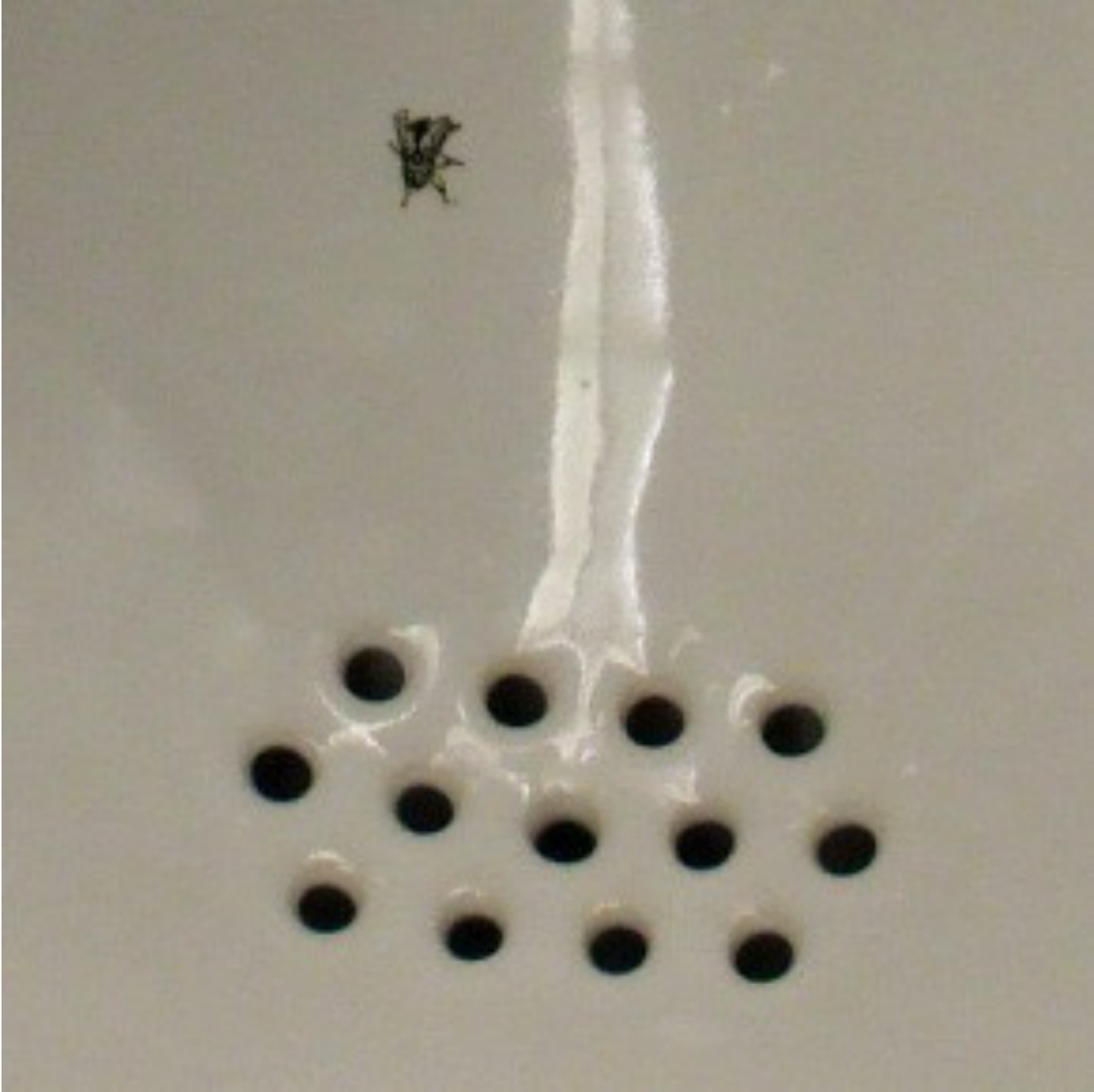
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Taxes collected in the first

12 MONTHS

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