

# Cognitive biases in Legal Decision-Making

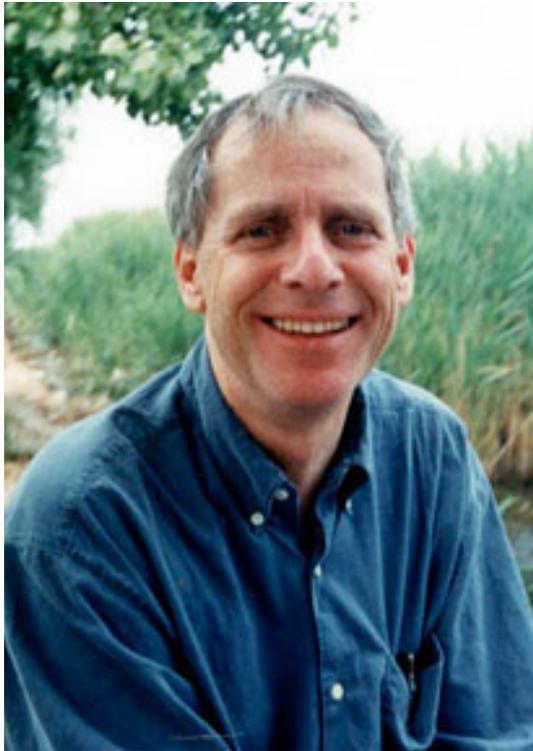
**IBA Annual Meeting**  
**“The Art and Science of Persuasion”**  
**Vancouver (Canada), October 4, 2010**  
**Manuel Conthe**

# Optical Illusions

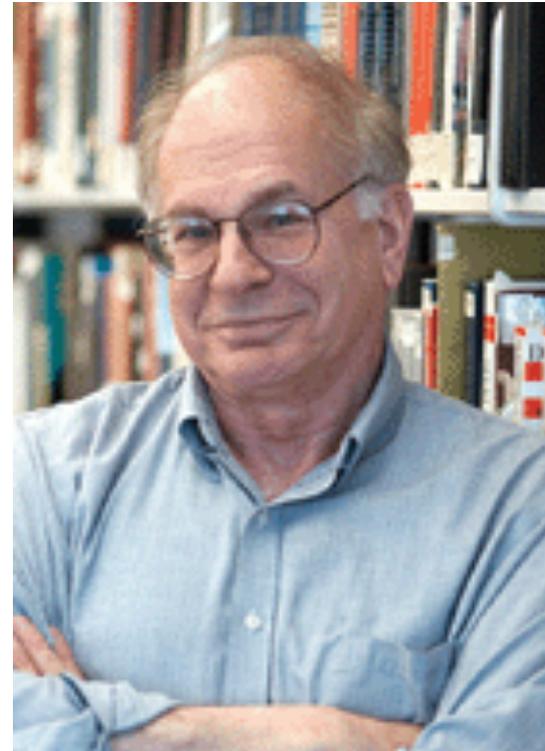


**Müller-Lyer Illusion**

# From optical illusions to cognitive biases: Behavioral Law and Economics (BLE)



**Amos Tversky  
(1937-1996)**



**Daniel Kahneman  
2002 Nobel Prize for Economy**

## The BLE view of decision-makers

- “Bounded rationality”
- “Heuristic rules”  
= mental shortcuts or rules of thumb, right most of the time, but not always.
- “Predictably irrational” (i.e. prone to systematic biases)
- Biases, like optical illusions, are difficult to overcome  
“De-biasing” is not easy

## Cognitive biases: a sample

- Hindsight bias
- Anchoring
- Creative perception

## Hindsight bias: definition

= once something has happened, we exaggerate its **ex-ante** predictability

(“I knew it all along”, “Monday morning quarterbacking”, “20/20 hindsight vision” ...)

## Hindsight bias, the Spanish way



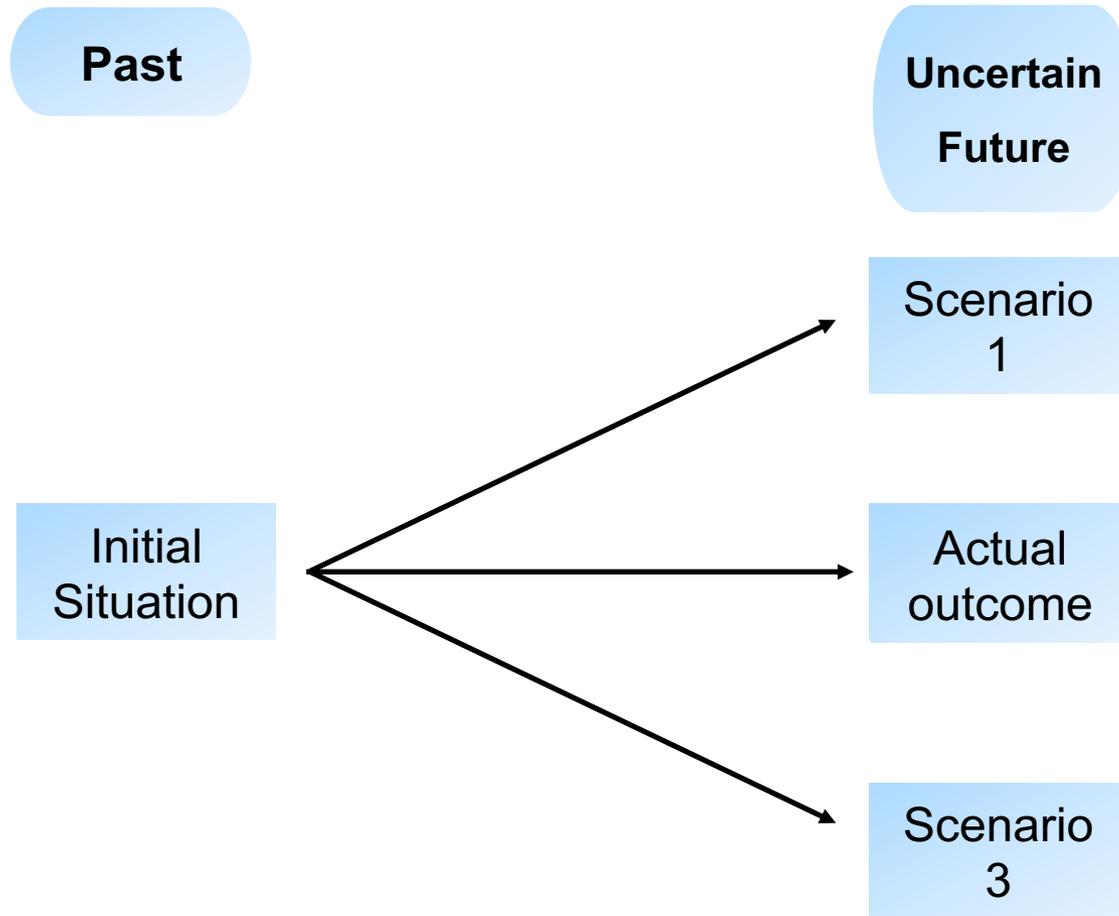
“A toro pasado, todos somos Manolete”

(“After the bull has past, we are all very corageous”)

## Hindsight bias: illustrations

- “*Obsolescing bargain*” (R. Vernon, 1964)
  - Risky projects (e.g. green-field FDI ) will only be undertaken if their ex-ante potential profitability is high...but.
  - If project is successful, its ex-post profitability will be considered a rip-off and taxed away.
- If public authorities sell or privatize shares, real estate, or gold before a boom, they may later be accused of “cronysm” or gross negligence.

## Hindsight bias: explanation



**In retrospect uncertainties disappear** and we overestimate the **ex ante** probability of the actual outcome

## Hindsight bias in Law

- **Patents:** once something has been discovered or invented, its novelty may be underestimated.
- **Tort litigation:** defendants may be declared negligent even if they applied reasonable care (e.g. radiologist who missed a tiny tumor).
- **Market abuse:** a speculative trading strategy may be considered abusive (e.g. “*pump and dump*”) even if it was just lucky.
- **Financial mis-representation/mis-selling:** after an unexpected crisis, financial institutions may be accused of inadequate disclosure of risks or even fraud (e.g. placement of Lehman’s notes).

## Hindsight bias in Law...and Politics!



“Iceland’s Parliament has voted to press **negligence charges** against former prime minister **Geir Haarde**, in the first concrete step to hold politicians accountable for the 2008 bank crisis that left the economy in ruins”

(FT, September 29, 2010)

## Hindsight bias: debiasing techniques

- Doctrine “Fraud by Hindsight (FBH)”

Formulated by Judges Henry Friendly (*Denny v. Barber*, 1978) and Richard Easterbrook (*Di Leo v. Ernst&&Young*, 1990).

= when claiming fraudulent non-disclosure of material information, plaintiffs should provide **contemporaneous** evidence of defendants’ scienter.

- Counterfactual thinking

= imagine deliberately plausible alternative scenarios which might have led to different outcomes

# Anchoring: the spinning wheel experiment

(Kahneman&Tversky, 1974)



- Is the percentage of African nations in the UN higher than X?
- What is your estimate of the percentage of African nations in the UN?

Spinning wheel's result (X)	Average estimate (%)
65	45
10	25

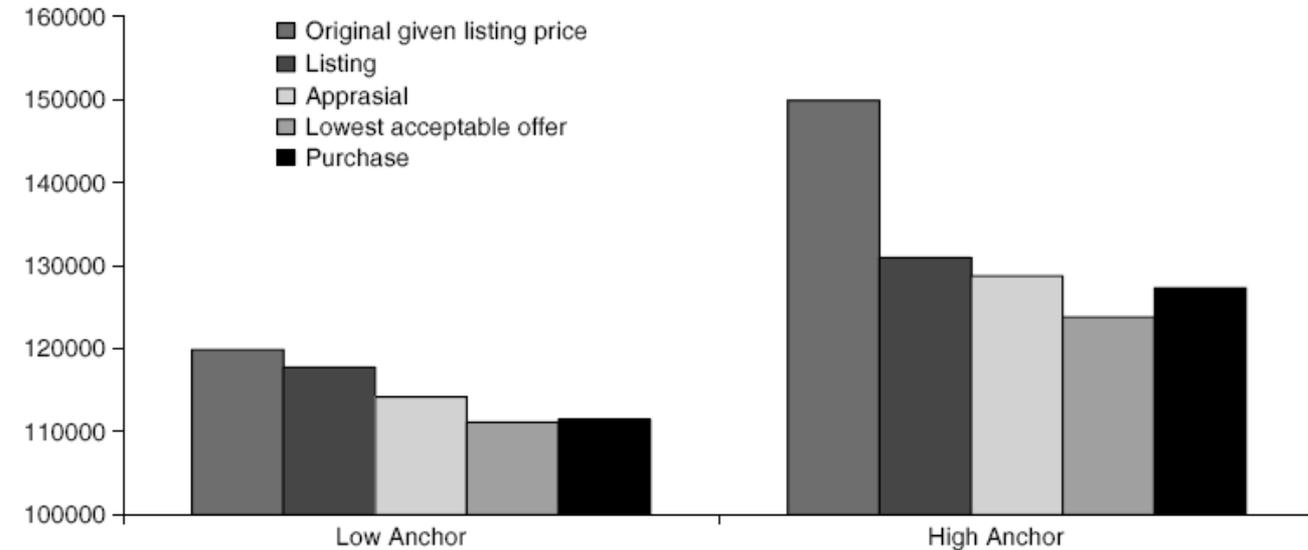
## Anchoring: other classical experiments

<b>Determine...</b>	<b>Anchor</b>	<b>Effect</b>
Average temperature in S. Francisco, height of Mount X, price of wine bottle or computer gear...	Last two digits of...(SSN, cell phone....)	Significant statistical relation between anchor and estimate
House valuation	Asking price suggested in passing by owner	Realtors strongly denied any influence of owner's asking price ... ...but it affected valuations!

# Anchoring in housing valuations by realtors

(Nortcraft & Neale 1987 experiment)

Anchoring and housing valuations



Source: Northcraft and Neale (1987)

G. Nortcraft and M. Neale, "*Experts, Amateurs and Real Estate: An Anchoring-and-Adjustment Perspective on Property Price Decisions*", Organizational Behavior and Human Decision Processes, 1987

## Anchoring and the financial crisis

Determine...	Anchor	Effect
Budgetary target, fiscal policy's stance	3% of GDP (Maastricht Treaty, 1992)	Excessively lax budgetary policy during upswings
Sustainable level of housing prices	Recent prices	Underestimation of housing bubbles
Future return of mutual fund, investment...	Recent returns	"Trend chasing"
Potential risk of financial portfolio, after a long period of stability	VAR estimate (based on Gaussian distribution of potential outcomes)	Underestimation of "tail risks" (Minsky, Taleb...)

# Anchoring in daily life

*(Priceless, the myth of fair value, W. Poundstone, 2010)*

<b>Decision</b>	<b>Anchor</b>	<b>We will buy...</b>
In a liquor store: which bottle of wine to buy?	Extremely expensive wine, prominently displayed	A moderately expensive wine (what a bargain!)
In a super-market: how many items to buy?	Buy 6-unit pack!	More than one item
In a restaurant: which hamburger to order?	\$100 Kobe steak hamburger	A moderately expensive hamburger

## Anchoring in Law

- The effect of plaintiffs' demands on damage awards:
  - "Boomerang theory" = "over-the-top demands for damages backfire, since they make plaintiffs appear greedy".
  - "The more you ask, the more you get"

Which theory is more realistic?

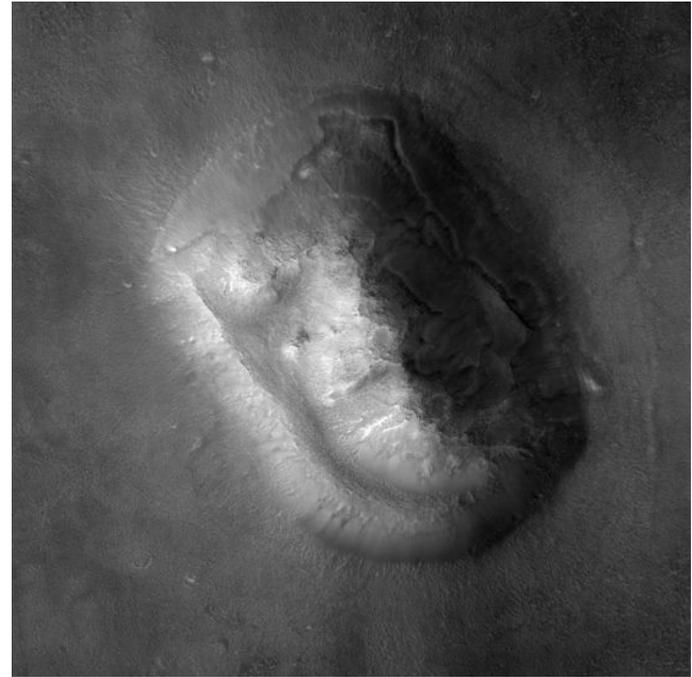
- May statutory damage caps increase awards for small injuries?

Should caps be disclosed to juries?

## Optical Illusions (II)



Face on Mars (Viking, 1976)



Mars Reconnaissance Orbiter (2006)

**Pareidoleia**

## Creative perception (“pareidoleia”)

“*Story model*” (Pennington & Hastie, 1991)

- We do not perceive raw facts, but “stories” (*Gestalts*)

“The central cognitive process in juror decision-making is story construction”

“Lawyers persuade by telling stories”

- Stories are often based on the “*stock of social knowledge*” and “*cultural archetypes*”.

“Trial stories require external narrative coherence”

i.e. stories are more convincing when they resonate with pre-existing beliefs

## Creative perception: potential biases

- Confirmatory bias, i.e. selective screening of evidence, on the basis of expectations or beliefs.
- Over-interpretation of evidence & neglect of alternative hypothesis.  
“Stories are not just recipes for stringing together a set of hard facts...stories construct the facts that comprise them” (Amsterdam & Bruner)

“Fooled by randomness” (Taleb)



# Creative perception in Law

- Negative biases:
  - o “Weapon bias” in police split-second decisions: objects are construed more often as weapons when held by black people.
- Positive biases:
  - o “Halo effect”: neglect of red flags in influential people’s behavior (e.g. The SEC and Madoff, in spite of repeated warning by John Markopoulos).
- Cultural differences in the interpretation of identical facts

## Arbitrators: the challenge of cognitive biases

Unfortunately, only **a few** arbitrators are good-looking.

But we need **all** to keep...

