# Unilateral Merger Effects & Economic Models

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Ah! well a-day! what evil looks
Had I from old and young!
Instead of the cross, the Albatross
About my neck was hung.

Samuel Taylor Coleridge,
*The Rime of the Ancient Mariner*

# Rise of Unilateral Effects

- By late 1980's Game Theory had replaced Structure-Conduct-Performance paradigm in IO
- Economists had more plausible stories than coordinated effects in many cases
- 1992 Guidelines re-emphasized unilateral effects
  - Satisfied attorneys' demand for simple intuition
  - Satisfied economists' demand for cohesive theory
- Not long before economists began building quantitative merger models

# "Structural" or "Behavioral" Models

- *Back End*:  Behavioral Model
  - Consumer, firm (& retailer) behavior
  - Equilibrium is  result of their interaction
- *Front End*:  Parameters "feed" the model
  - Estimation (can be costly, fruitless)
  - Calibration to observed data, like margins
- *Equilibrium*
  - Current equilibrium (observed)
  - Post Merger equilibrium (predicted)

# Rise of Structural Merger Models

' Models used to critique market share presumption
  – Markets boundaries are bright lines where none exist
  – Shares are poor proxies for competitive positions
  – à Concentration is poor predictor of unilateral effects

' 1995 IBC-CBC è challenge
  – Product and geographic delineation problems. White pan bread in Chicago

' 1996 L'Oreal-Maybelline è no challenge
  – L'Oreal did not compete with Maybelline despite big shares

# Thesis à Antithesis

- Ten years building merger models
  - Focus on methodological innovation
- Dave Scheffman critique
  - "fit accompli": Does the models fit the facts?
  - Makes cases too easy to bring (false positives)
  - Huge logical leap from retail elasticities to upstream price increases
    - What about intermediate steps?

# From Vanderbilt to the FTC

|  | Academic | Practitioner |
|---|---|---|
| Concern | Methodological innovation | How well is methodology applied to case |
| Outcome | Demonstrate policy tradeoffs | Need an answer |
| Check & balance | Peer review | Adversarial litigation |

# Thesis à Antithesis à Synthesis

- "A Daubert Discipline for Merger Simulation"
  - Gregory J. Werden, Senior Economic Counsel, U.S. Department of Justice
  - David Scheffman, LECG & Adjunct Professor at Vanderbilt
- If you use models, must fit facts of case Every assumption should be:
  - supported by evidence, or
  - subject to sensitivity analysis

# Structural Models are Only Tools

- At best, can focus investigation by identifying:
  - "What" matters, "why," and "how much"
  - Offer way to consider efficiencies
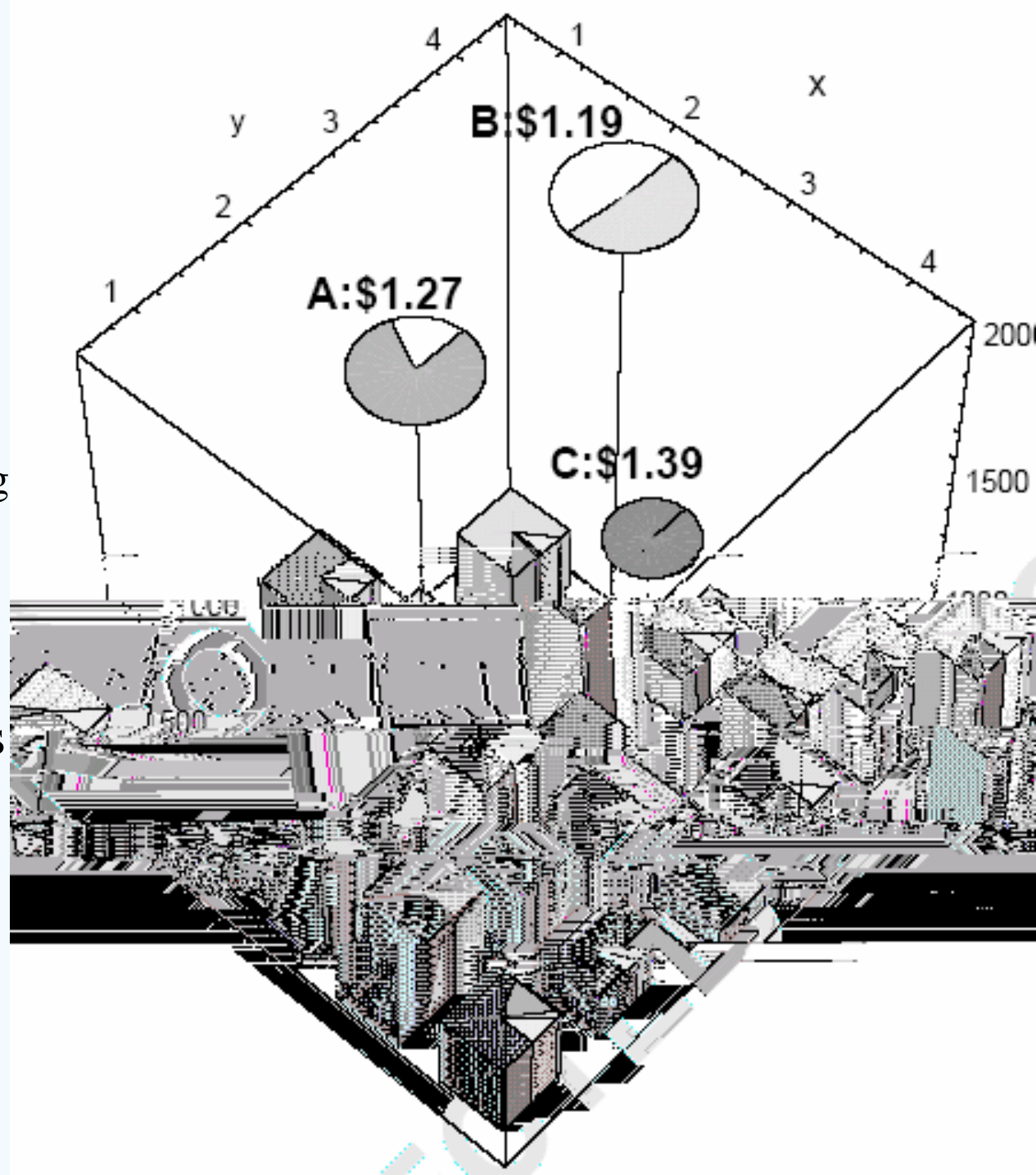- At worst, ignore important industry features
  - Misleading predictions

# Example: Parking

Key parameters
- cost of walking
- locations of merging non-merging lots
- location of offices
- capacity of lots

Capacity constraints on merging lots attenuate merger effects.

Competition very localized

# Other Structural Models

- Oral Auctions
    - Merger effect is frequency of 1-2 finish times distance between second and third-lowest costs
- Bargaining
    - Alternatives to agreement determine terms of agreement
    - Example: "Any willing provider" laws
- Bertrand
    - Elasticities critical

# Should we use Models? Three Answers

- YES: Behind every competitive story is a model
  - By making assumptions explicit, one can test model's predictions
- NO: Less Formal analysis is good enough
  - What is the value proposition?
  - What will customers say?
  - What do documents, 0⁄TT1 1 Tvaluo do6 say?

# Warnings

- Don't get bogged down in estimation
  - time consuming, often with little payoff
  - With more than a handful of goods, difficult to get good estimates.
  - Lots of practical difficulties
  - Diverts attention from other evidence?
    - Surveys
    - Natural experiments
- Ask your economist if her model can explain the observable data.

# A Daubert Discipline for Merger Simulation

- It is possible to ask Daubert-like questions to assess model appropriateness and fit.
  - Does model accurately characterize observable data?
- For assumptions that matter to conclusions:
  - Gather evidence to support; or
  - Choose conservative assumption
- What would happen if we applied this standard to vertical stories?