Algorithms and Big Data: The Antitrust and Ethical Risks of Artificial Intelligence

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Agenda

- Overview of Artificial Intelligence (AI) and Ethical Risks
- Antitrust 101
- AI and Collusion
  - Information Sharing
  - Algorithmic Pricing
- AI and Monopolization
- AI and Price Discrimination

History of AI

- Alan Turing and the Turing Test (1950)
- The Dartmouth Conference (1956)
- Early AI Developments (1950s – 1960s)
- AI Winter (1970s)
- Expert Systems (1980s)
- Machine Learning and Neural Networks (1990s – present)
- Recent Breakthroughs (2010s – present)

Overview of AI

- Generally, refers to a machine's ability to learn from experience and inputs instead of being programmed
- Everyday examples of AI: Smart assistants (Soiri & Alexa); Facial recognition software (Face ID); Generative AI (ChatGPT)
- AI in legal practice: Document review (predictive coding); Legal research (natural language searches); Preparing first drafts; Summarizing cases
- While AI tools can help a lawyer and save clients money, **antitrust laws** and **ethical duties** still apply.

Ethical Risks of Using AI

- When using AI tools, a lawyer **must** comply with their ethical duties to courts and clients.
  - Duty of Candor – must not make any knowing false statements of fact or law to a court, including in briefs
  - Duty of Competence – need to understand how AI tools operate and the risks they pose
  - Duty of Communication – should obtain informed consent from clients before using AI tools for client matters; lawyers should know in advance what types of risks AI tools present and discuss those with the client
  - Duty of Confidentiality – ensure that client information is secure when using AI tools
  - Duty to Supervise – must supervise AI generated work to ensure compliance with the Rules
- Bias – should be aware that if biased data is used in training an AI tool, it may produce biased results

"[Respondents] abandoned their responsibilities when they **submitted non-existent judicial opinions with fake quotes and citations created by the artificial intelligence tool ChatGPT**, then continued to stand by the fake opinions after judicial orders called their existence into question."

Mata v. Avianca, Inc., 678 F. Supp. 3d 443, 448 (S.D.N.Y. 2023)

How I Should Present a CLE on AI and Antitrust, According to AI?

JL **You**

Create a CLE presentation outline for antitrust and AI

ChatGPT

I. Introduction

A. Brief overview of Antitrust laws

B. Intersection of Antitrust and AI

II. Antitrust Concerns in the AI Industry

A. Market dominance and abuse

B. Collusion and price fixing

C. Impact on competition and innovation

III. Case Studies

A. Review recent antitrust cases involving AI

B. Analyze outcomes and implications

IV. Key Antitrust Principles

A. Horizontal and vertical restraints

B. Monopolization and abuse of dominance

C. Mergers and acquisitions in the AI sector

V. Regulatory Landscape

A. Overview of global antitrust regulations

B. Specific regulations addressing AI

C. Challenges in enforcement and compliance

VI. Emerging Issues

A. AI collaborations and standard-setting

B. Data privacy and antitrust considerations

C. International cooperation in regulating AI and antitrust

Antitrust Implications of AI

- Big Picture Economic Perspective:
- Developments in AI have led to rapid change and innovation in many industries.
- But the use of AI can raise antitrust concerns.
- We have seen “traditional” AI-based antitrust cases begin to play out—e.g., price fixing and information sharing.
- Given the possibilities of what generative AI can do, we expect there is much around the corner.

Antitrust 101

- “Magna Carta of free enterprise”
- Protects markets from anticompetitive activity
- Pillars of U.S. Antitrust Law
  – Sherman Act Section 1: Prohibits agreements in restraint of trade
  – Sherman Act Section 2: Prohibits unlawful monopolies
  – Clayton Act Section 7: Prohibits anticompetitive mergers
  – Also, Robinson-Patman Act: Prohibits price discrimination
- States taking on a larger role / proposing legislation

Horizontal Agreements

- Focus is on <u>agreements</u> with <u>competitors</u> not to compete
- Agreements on price
  - **Minimum or maximum price**
  - **Stop discounting**
  - **Establish a fixed margin**
  - **Establish fixed credit terms or other conditions of sale**
- Agreements on other bases
  - **Rotating bids**
  - **Allocation of customers or markets**
  - **Production/capacity/availability constraints**
  - **Restrictions on innovation**
- Note on information sharing

Algorithmic Pricing

- What are we talking about?
- Pricing strategies that use an **automated system** to set, adjust, or recommend prices (i.e., automatic price adjustment).
- A number of competitors may use the same system for their prices.
- Part of that system may involve each competitor uploading their data for use by the pricing algorithm.
- We have seen price fixing and information sharing challenges to sets of facts similar to these.

U.S. Jury Instruction on Collusion

- In order to prove that a price-fixing conspiracy existed, the evidence must show:
  - The alleged members of the conspiracy
  - In some way
  - Came to an *agreement* or *mutual understanding*
  - To accomplish a *common purpose*

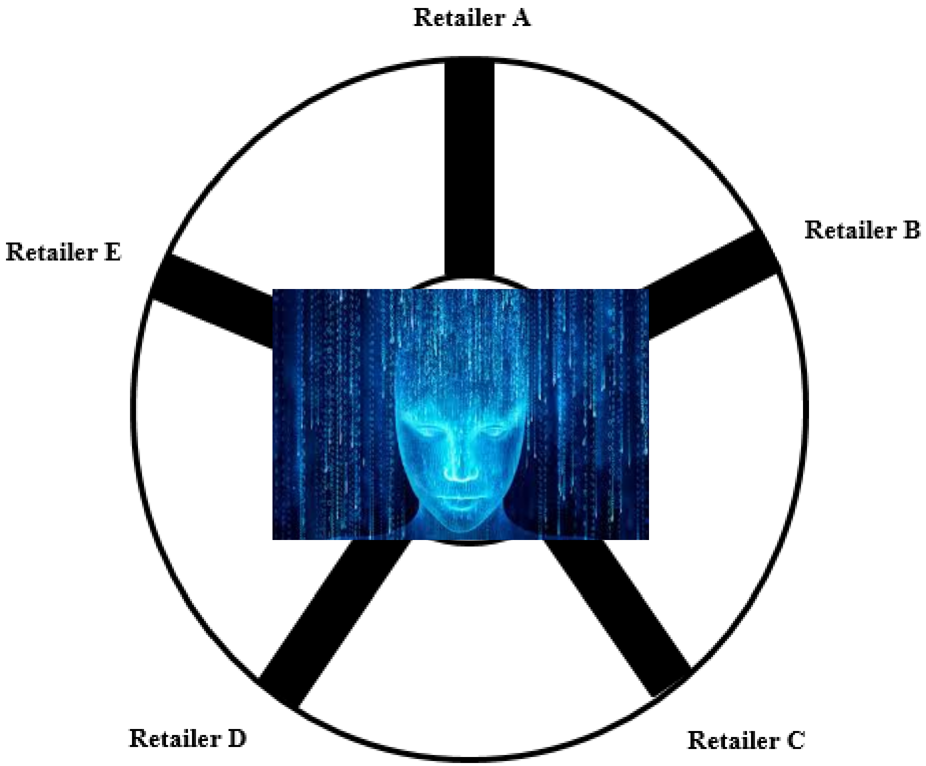
U.S. Jury Instruction (cont.)

- However, the evidence need <u>not</u> show that:
  - Its members entered into any *express, formal*, or *written agreement*;
  - They *met together*; or
  - They *directly stated their purpose*, the *details of the plan*, or *the means by which* they would accomplish their purpose.
- The agreement itself may have been entirely unspoken.

AI and Collusion

- Easy Case (collusion using algorithms):
  - Competitors agree to fix prices over the phone.
  - To implement that agreement, they program a pricing algorithm to charge the agreed-upon prices.
  - We have seen this case already (U.S. and U.K.)
- Harder Case (collusion by algorithms)
  - A vendor sells an algorithmic pricing tool to multiple competitors in an industry
  - The tool ingests data from each competitor and then provides AI-based pricing to each competitor

AI and Collusion



Algorithmic Pricing and AI

- Harder Case (continued):
  - Does it matter if each seller knows the others are using the same software?
  - Does it matter the sellers adopted the algorithm over a period of several years?
  - Does it matter if the information provided is public or private?
  - What if the prices provided are just recommendations?
  - What if 90%+ of businesses follow this recommendations?

AI and Collusion

- Hardest Case:
  - Self-learning algorithmic pricing tool fixes prices with a competitor's algorithm to maximize profit without any human instruction
  - This is around the corner
  - *"They may not always know exactly how an automated system will use its algorithms to take decisions. What businesses can – and must – do is to ensure antitrust compliance by design."* – Margarethe Vestager, European Commissioner for Competition

Information Sharing

- Sharing competitively sensitive information may independently violate antitrust laws
  - May also serve as evidence of a price-fixing conspiracy
- Prior DOJ/FTC guidelines, withdrawn in 2023, provided "safety zones"
- Safety zones included:
  - Information was more than three months old
  - At least five participants reporting data
  - No one participant's data was more than 25%
  - Information was aggregated
  - Collection/exchange was managed by a third party

Information Sharing – Recent Guidance

- "[F]lexible inquiry" to determine whether the "principal tendency" is to harm competition
- Factors include:
  - Sensitivity of information
  - Granularity of information
  - Public availability
  - Contemporariness of information
- Typically evaluated under the Rule of Reason, which weighs the pro-competitive benefit of the practice against its anti-competitive harms.

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MINNESOTA

IN RE PORK ANTITRUST LITIGATION *This Document Relates to:* *All Actions*	No. 0:18-cv-01776-JRT-JFD Honorable John R. Tunheim

STATEMENT OF INTEREST OF THE UNITED STATES

AI and Information Sharing

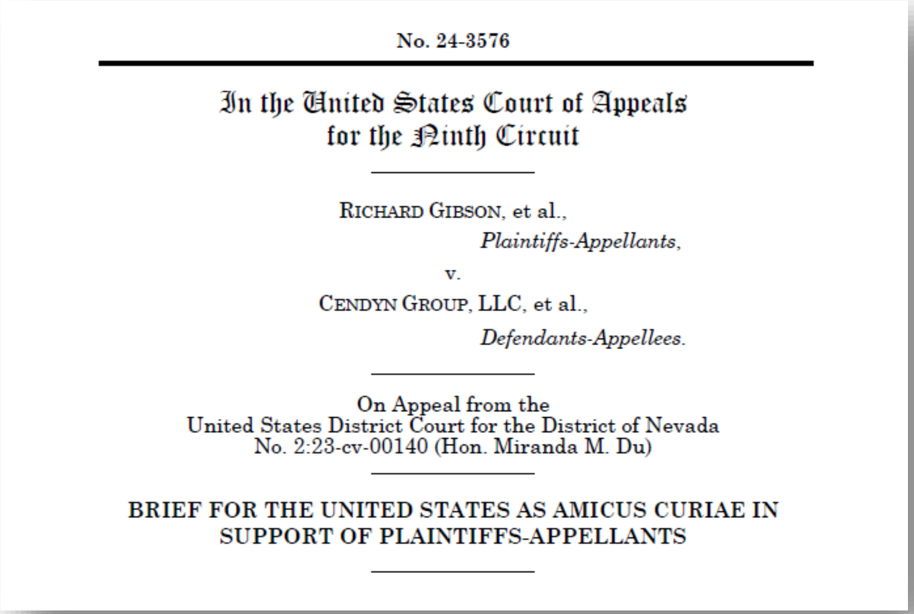
- Enforcers are focused on the use of pricing algorithms to exchange information—**using an automated system to "optimize" prices or supply through the exchange of information**
- Private litigation has led the way: Multiple cases involving hotel pricing, health care, and apartment rental pricing accused the defendants of unlawful information sharing through the use of common pricing algorithms
- DOJ also filed its first major algorithmic pricing case, accusing the defendants of unlawfully sharing information for use in competitors' pricing
  - The DOJ/FTC were actively filing statements of interest in this area in private litigation as well.

Algorithmic Pricing: Enforcers' Perspectives

- November 2023: DOJ statement of interest in In re RealPage (M.D. Tenn.):
  - **DOJ makes clear that it still considers price-fixing via algorithms illegal**: "[W]hether firms effectuate a price-fixing scheme through a software algorithm or through human-to-human interaction should be of no legal significance."
  - DOJ asserts that firms "**knowingly** combining their **sensitive, nonpublic pricing** and supply information in an algorithm that they rely upon in making pricing decisions, **with the knowledge and expectation that other competitors will do the same**," is per se illegal under Section 1.

Algorithmic Pricing: Enforcers’ Perspectives

- October 2024: DOJ Amicus Brief in *Gibson v. Cendyn* (9th Cir.)
  - First algorithmic pricing case in an appellate court.
  - “[A]n algorithm provider’s ‘pitch’ could constitute an invitation for collective action among competitors … and subsequent joint use of the algorithm could demonstrate acceptance of that invitation.”
  - “Per se unlawful horizontal price fixing includes concerted action among competitors to use a common entity’s pricing algorithm to set default or starting-point prices.”


No. 24-3576

In the United States Court of Appeals
for the Ninth Circuit

RICHARD GIBSON, et al.,
Plaintiffs-Appellants,
v.
CENDYN GROUP, LLC, et al.,
Defendants-Appellees.

On Appeal from the
United States District Court for the District of Nevada
No. 2:23-cv-00140 (Hon. Miranda M. Du)

BRIEF FOR THE UNITED STATES AS AMICUS CURIAE IN SUPPORT OF PLAINTIFFS-APPELLANTS

United States, et al. v. RealPage, Inc.:

- Filed August 23, 2024, in Middle District of North Carolina
- Complaint alleges that RealPage contracts with competing landlords who agree to share with RealPage nonpublic, competitively sensitive information about their apartment rental rates and other lease terms to train and run RealPage's algorithmic pricing software.
- Complaint alleges such conduct violated both Section 1 and Section 2 of the Sharman Act through an unlawful information sharing scheme in coordination with real estate management companies.

Beginning To Get Some Guidance From Courts

- Key Questions:
- Agreement among competitors to use same pricing software?
- Are pricing recommendations delegated or binding?
- Competitors adopt pricing algorithm at the same time?
- Is confidential information exchanged through the algorithm or used to generate pricing recommendations?

Case Study: Court **Grants** Motion to Dismiss in *Cendyn* (D. Nev.)

- Judge dismissed antitrust claims
- Found that the "mere use of algorithmic pricing based on artificial intelligence by a commercial entity, without any allegations about any agreement between competitors—whether explicit or implicit—to accept the prices that the algorithm recommends does not plausibly allege an illegal agreement."
- No DOJ statement of interest (in the district court), and the Court noted that it was not required to give the DOJ's views "any special deference."

Gibson v. Cendyn Group, LLC et al., Case No. 2:23-cv-00140 (D. Nev.)

Case Study: Court **Denies** Motion to Dismiss in *Yardi*

- Found that the plaintiffs plausibly alleged a horizontal agreement between the lessors under Section 1 of the Sherman Act based on their decisions to use RENTmaximizer
- Plaintiffs alleged that RENTmaximizer invited lessors to "trade their commercially sensitive information for the ability to charge increased rental rates without fear of being undercut by competitors."
  - Alleged that the defendant lessors understood that providing data to Yardi and using RENTmaximizer was only beneficial if competitors did the same.
- Held that the type of computerized algorithmic pricing conduct alleged by plaintiffs should be treated as *per se* illegal. (Compare to *RealPage*)

Duffy v. Yardi Sys., Inc., No. 2:23-cv-01391 (W.D. Wash.)

Monopoly Power

- Often shown through high market share + entry barriers
- AI as an entry barrier
  - Large capital requirements to develop algorithm
  - Data requirements for effective AI use
    - Incumbent firm advantages
    - Exclusivity with third parties
  - Strategic targeting of nascent firms
- Potential monopolistic acts using AI:
  - Algorithmic pricing tools can facilitate **predatory pricing**, especially with the right data through hyper-targeting of brand-agnostic customers for below-cost prices. Businesses can recoup losses through the most brand-loyal customers.
  - Algorithmic tools could enable bespoke **tying arrangements**, which could in theory, create “custom” tying arrangements depending on each customer using data on demand.
  - This type of conduct is largely around the corner, and we have not seen this play out yet.

Price Discrimination & AI

- AI tools can effectively enable "perfect" price discrimination
  - With the right data, businesses can charge customers prices based on what they are willing to pay
- Lot of exceptions
  - Cost justification
  - Functional discount
  - Meeting competition

DOJ Evaluation of Corporate Compliance Programs

The updated guidance asks 9 questions about AI:

1. “How does the company assess the potential impact of new technologies, such as artificial intelligence (AI), on its ability to comply with criminal laws?”
2. “Is management of risks related to use of AI and other new technologies integrated into broader enterprise risk management (ERM) strategies?”
3. “What is the company’s approach to governance regarding the use of new technologies, such as AI in its commercial business and in its compliance program?”

– *DOJ, Criminal Division, Evaluation of Corporate Compliance Programs (updated Sept. 2024)*

Evaluation of Corporate Compliance Programs (cont.)

4. “How is the company curbing any potential negative or unintended consequences resulting from the use of technologies, both in its commercial business and in its compliance program?”

5. “How is the company mitigating the potential for deliberate or reckless misuse of technologies, including by company insiders?”

6. “To the extent that the company uses AI and similar technologies in its business or as part of its compliance program, are controls in place to monitor and ensure its trustworthiness, reliability, and use in compliance with applicable law and the company's code of conduct?”

– *DOJ, Criminal Division, Evaluation of Corporate Compliance Programs (updated Sept. 2024)*

Evaluation of Corporate Compliance Programs (cont.)

7. "Do controls exist to ensure that the technology is used only for its intended purposes? What baseline of human decision-making is used to assess AI?"

8. "How is accountability over use of AI monitored and enforced?"

9. "How does the company train its employees on the use of emerging technologies, such as AI?"

– *DOJ, Criminal Division, Evaluation of Corporate Compliance Programs (updated Sept. 2024)*

Best Practices for AI & Antitrust

- Assess how the company makes pricing decisions.
  - What (if any) algorithmic pricing software does the company use?
  - What (if any) information does the company share to use that software?
  - Is the information shared publicly available or otherwise commercially sensitive?
- <u>Do not</u> discuss pricing or pricing algorithms with competitors.
  - This includes discussing which software they might be using

Best Practices for AI & Antitrust (cont.)

- If using a third-party, do ensure data is not shared with competitors.
  - Even indirectly via pricing recommendations based on your data input
  - Assess what commercially sensitive data the company provides to or obtains from third parties (e.g., industry data sources, trade associations)
- If using in-house pricing algorithms or other AI-based software:
  - Do consider antitrust training for software engineers.
  - Do design that software with antitrust principles in mind.
  - Do not assume the software will comply with the law.

Questions?