Artificial Intelligence and Robotics: Ethical, Legal, and Social Implications

Stephen S. Wu
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Society of Corporate Compliance and Ethics
San Francisco Regional Conference

“Contagion”

• A changed world
• Tremendous job losses lead to widespread unemployment; jobs not returning
• Wide swath of the population becomes dependent on the government for survival
• Universal basic income concepts
• Massive deficit spending
• National and global social dislocation
Al Importance

- “AI is rapidly becoming a pervasive aspect of the present.”
- AI “is the dominant technology of the future.”
- “gaining access to considerably greater intelligence would be the biggest event in human history.”

Stuart Russell, Human Compatible (2019)
AI’s Impact

“I believe it's going to change the world more than anything in the history of mankind. More than electricity.”
Kai-Fu Lee
On 60 Minutes

Four Key Principles

• AI and robotics technologies are here and growing
• Tremendous impact of the technology
• Legal issues will arise
• All of us play a role . . .
Artificial Intelligence Is . . .

- A field of study
- Outgrowth of a 1956 Dartmouth conference
- Machines simulating features of human intelligence
- Perception-reasoning-action
- “the future” (WaPo article)
- Existential threat?
- A source of hype
- A game changer

Al Law Practice

- Transactions
- Compliance
- Liability
- Investigations/incident response
- Governance (legal and ethical)
Technology Examples
Driverless Cars

Future Modes of Transportation
Drone Deliveries by Air

Drone Deliveries by Ground
Service Robots

Security Robot
Warehouse Robots

Automated Farming Equipment
Household Service Robots

Customer Service Robot
San Jose Airport Robot

Retail and Kiosk Robots
Automated Coffee Kiosk

Inventory Robot
Personal Robots

Electronic Agents
Mobile Banking Agents

Automated Loan Applications and Evaluations
Large Scale Artificial Intelligence

Automated Trading Systems
Authentication and Anti-Money Laundering

Robotic Process Automation
Due Diligence and Investigations

Retail and Financial

How Target Figured Out A Teen Girl Was Pregnant Before Her Father Did
Generative Adversarial Networks

Deepfakes
Smart and Connected Devices

Smart Scalpel/Al Solution
Saving a Life

Surgical Robots
Computer-Assisted Surgical Systems

Nursing/Eldercare Robot
Hospital Service Robots

Telepresence Medical Robots
Robotics and COVID-19

Sanitization Robots
AI in Medicine

AI and COVID-19
• Tracking virus infections and predicting progression
• Detecting fever through machine learning
• Elder monitoring systems
• Treatment and vaccine discovery
FDA: Nanotechnology

The AI Doctor or Advisor?
Thought-Controlled Prostheses

Brain-Computer Interface

Researcher controls colleague's motions in 1st human brain-to-brain interface
Brain-to-Brain Collaboration

Neural Devices
Part of Larger Trends

Exponential Increases in Computing Power
While Prices are Falling

The AI View of the World

Ambient Intelligence

Body Area Network
Artificial Intelligence & Robotics
Privacy & Security Technologies
Mobile computing
Social networks
3D Printing & JIT Manufacturing
Big Data
Augmented & Virtual Reality
Internet of Things
Cloud Computing

Augmented & Virtual Reality

3D Printing & JIT Manufacturing

Privacy & Security Technologies

Social networks

Mobile computing

Big Data

Internet of Things

Cloud Computing

Ambient Intelligence
ELSI

- Ethical
- Legal
- Social implications

AI and Robotics ELSI Issues
What could go wrong?
What Could Go Wrong?

- Accidents
- Malpractice
- Data breaches
- Nonpayment/non-delivery
- Breaking the law
- Misuse
- IP Infringement

- Bias
- Discrimination
- Fraud
- Election manipulation
- Job losses
- Social dislocation
- Authoritarianism

Key Themes from the ABA AI National Institute

- Replacement of workers
- Standard of care/liability
- Human-AI interface
- Privacy and security
- Transparency
- Bias
- Autonomy
- Interdisciplinary
- Ethics
- Something bigger than ourselves
Compliance Examples

Autonomous Driving Laws

Legend:
- Enacted Legislation
- Executive Order
- Bill
- Rule
- None
FAA Part 107 Waivers/Certificates of Authorization: Drone Deliveries

Small Drone Options

<table>
<thead>
<tr>
<th>Fly under the Special Rule for Model Aircraft (Section 336)</th>
<th>Fly under the FAA’s Small UAS Rule (Part 107)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Fly for hobby or recreation ONLY</td>
<td>• Fly for recreational OR commercial use</td>
</tr>
<tr>
<td>• Register your model aircraft</td>
<td>• Register your drone</td>
</tr>
<tr>
<td>• Follow community-based safety guidelines and fly within the programming of a nationwide community-based organization</td>
<td>• Get a Remote Pilot Certificate from the FAA</td>
</tr>
<tr>
<td>• Fly a model aircraft under 55 lbs. unless certified by a community-based organization</td>
<td>• Fly a drone under 55 lbs.</td>
</tr>
<tr>
<td>• Fly within visual line-of-sight</td>
<td>• Fly within visual-line-of-sight*</td>
</tr>
<tr>
<td>• Never fly near other aircraft</td>
<td>• Don’t fly near other aircraft or over people*</td>
</tr>
<tr>
<td>• Notify the airport and air traffic control tower prior to flying within 5 miles of an airport</td>
<td>• Don’t fly in controlled airspace near airports without FAA permission*</td>
</tr>
<tr>
<td>• Never fly near emergency response efforts</td>
<td>• Fly only during daylight or civil twilight, at or below 400 feet*</td>
</tr>
</tbody>
</table>

* These rules are subject to waiver.
Artificial Intelligence
Video Interview Act

• Illinois HB 2557, Pub. Act 101-0260
• Covers Illinois employers
• Requires notice to job applicants of AI used to analyze a video interview and consider fitness
• Employers must provide an explanation of the technology and characteristics used
• Must obtain consent to use of AI
• Employers may not share videos except vendors
• Right of erasure w/i 30 days, including backups

Bot Disclosure Law

• SB 1001, at B&P Code 17940-17943 (short), 9/6/18, effective 7/1/19
• It is unlawful to use a bot
  – To communicate online
  – Intent to mislead the other person about its “artificial identity”
  – To knowingly decide the person about the content
  – To incentivize a purchase of goods or services or influence a vote
• Safe harbor: A person using a bot discloses that it is a bot
  – Clear, conspicuous disclosure designed to inform
Elections: Deceptive Audio or Visual Media

• AB 730 (2019) - Elections Code Section 20010
• 1/1/23 version: no superimposing images
• Until 1/1/23: No materially deceptive audio or visual media to injure reputation or deceive voters
• Safe harbor: use of a disclaimer

General Data Protection Regulation

• Article 15: right of access to information about personal data collected
• Article 15 para. 1(h): right of a data subject to know about automated decision-making
• Recital 71: a “right of explanation”
• Article 22: Right not to be subject to a decision based solely on automated processing (right of human intervention)
California Consumer Privacy Act of 2018

• AB 375, approved June 28, 2018, effective 1/1/2020
• Civil Code 1798.100-1798.198
• Who is covered? Larger businesses not already regulated by health or fin service laws) - $25 M in revenue, PI on 50,000, or 50% or more revenue from the “sale” of PI.
• Who is protected? California “consumers”/residents (can be employees) while in Cal.
• What rights: Disclosures about collected information (collection, use, disclosure), right of erasure, opt out right from sale of PI (link from homepage)
• Broad PI definition
• Can’t discriminate against consumers

Connected Device Law

• SB 327, AB 1906, Civil Code 1798.91.04, 9/28/18, effective 1/1/20
• A manufacturer of a connected device shall equip the device with “reasonable” security features that are:
  – Appropriate to the nature and function of the device
  – Appropriate to the info collected, contained, or transmitted
  – Designed to protect against unauthorized access, destruction, use, modification, or disclosure
• Any device or object connecting to the Internet, directly or indirectly, assigned an IP or Bluetooth address
• See also Or. Rev. Stat. 646.607
Consumer Protection Laws

- FTC Act Section 5
- Unfair Competition Law, B&P Code 17200
- False Advertising Law, B&P Code 17500
- Cal. Consumer Legal Remedies Act, CC 1750-1784

Tesla Autopilot System
How Engineers See Tesla’s Autopilot

Collision Between a Car Operating With Automated Vehicle Control Systems and a Tractor-Semitrailer Truck Near Williston, Florida
May 7, 2016

longer obstructed. Autosteer automatically steers the car to keep it within its lane of travel. In short, TACC provides longitudinal control (acceleration and deceleration) and Autosteer provides lateral control (steering) of the car within the lane, making the Tesla Autopilot consistent with an SAE International (SAE) Level 2 automated vehicle system. (The SAE classification of automated

How is Tesla’s Autopilot System Sold?

THE PERSON IN THE DRIVER’S SEAT IS ONLY THERE FOR LEGAL REASONS.
HE IS NOT DOING ANYTHING.
THE CAR IS DRIVING ITSELF.
Result? Sheikh v. Tesla (Settled)

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

DEAN SHEIKH, JOHN KELNER, TOM MLONE, DAURY LAMARCHE, DAN WHELAN, and MICHAEL VERDOLEN, on behalf of themselves and all others similarly situated,

Plaintiffs,

v.

TESLA, INC. d/b/a TESLA MOTORS, INC., a Delaware corporation,

Defendant.

No. 5:17-cv-02193-BLF
SECOND AMENDED CLASS ACTION COMPLAINT FOR VIOLATION OF STATE CONSUMER FRAUD ACTS, FRAUD BY CONCEALMENT, AND UNJUST ENRICHMENT
DEMAND FOR JURY TRIAL

Mitigating Risk

UNFAIR AND DECEPTIVE TRADE PRACTICE CLAIMS AGAINST MANUFACTURERS OF AUTOMATED VEHICLES

BY STEPHEN S. WU
Ethics, Meet Ethics

Professional Ethics v. Moral Philosophy

- Scope: tied to a profession
- Code-based
- Based on broad-based consensus principles
- Once established, rules are binding
- Rules established in the code
- What to do? Read the rules.
- Violations subject to discipline

- Scope: general
- No code
- Fundamental disagreements on principles
- Principles are not binding; it’s a matter of right and wrong
- No body of rules, but rather principles
- What to do? Apply the principles.
- Violations subject to condemnation or reputational loss
Principal Approaches to Ethics

- Deontological ethics (rules-based systems)
- Utilitarianism (maximizing utility, focusing only on consequences)
- Virtue ethics (patterning behavior on the virtuous person)
- Role of “thought” experiments (e.g., “trolley” problems)

Legal Effects of “Ethical” Decisions

*Image of autonomous vehicles and the text: WHEN LAW AND ETHICS COLLIDE WITH AUTONOMOUS VEHICLES*
Governance

• Governance process
• Privacy and security policies
• AI and robotics governance touchpoints
  – Development
  – Offering
  – Procurement
  – Operation
  – Decommissioning

Examples of Governance Documents

• AI risk assessment
• AI impact assessment/statement
• Operational documents
  – Policies
  – Procedures
  – Guidelines
  – Technical standards
  – Training materials
Human enhancement: a narrow view

Minimally functioning person

Einstein

A broader view (superintelligence):

Mouse

Minimally functioning person

Chimp

Einstein
Superintelligence

Following Up
Read These Books

The Fourth Industrial Revolution
Klaus Schwab
Founder and Executive Chairman, World Economic Forum

LIFE 3.0
BEING HUMAN IN THE AGE OF ARTIFICIAL INTELLIGENCE
MAX TEGMARK
Author of Our Mathematical Universe

Stay Informed
Publications and Programs

Artificial Intelligence and Robotics National Institute

Science & Technology Law Section
The mission of the ABA Science & Technology Law Section is to provide leadership on emerging issues at the intersection of law, science, and technology; to promote sound policy and public understanding on such issues; and to enhance the professional development of its members.

SciTech – Information Security
SciTech – Artificial Intelligence and Robotics
Meetup on Robotics and AI Legal Issues

ABA AI and Robotics National Institute
October 12-13, 2020
Values in the Law

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<thead>
<tr>
<th>Behavior to be Addressed</th>
<th>Legal Value Promoted</th>
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<tbody>
<tr>
<td>Unlawful</td>
<td>Compliance</td>
</tr>
<tr>
<td>Fraudulent</td>
<td>Trustworthiness</td>
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<tr>
<td>Concealment</td>
<td>Truth</td>
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<tr>
<td>Black box system</td>
<td>Transparency</td>
</tr>
<tr>
<td>Unfair</td>
<td>Fairness and Justice</td>
</tr>
<tr>
<td>Negligent</td>
<td>Reasonableness and security</td>
</tr>
<tr>
<td>Intrusive</td>
<td>Respectfulness and privacy</td>
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<tr>
<td>Authoritarian</td>
<td>Freedom and human rights</td>
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Questions and Discussion

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