Promise of Legal Disruption: Smart Contracts & Beyond

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Smart Contracts

- **Are Smart Contracts Legal Contracts?**

  - **Unlikely; more likely part of a contract**

- **Escaping the legal system: "Trustless Trust"**

- **Are Smart Contracts' Smart?**

  - **Simple; not smart in AI sense**

- **Making Smart contracts smarter**

  - **Oracles**

  - **Not fully automated: multiple-signature verification**

  - **Private, permissioned blockchain (less costly; faster; knowable nodes**

    - **Increases scalability**

  - **Tech solutions: Sharding—nodes store parts**

Regulating Blockchain

- **<u>Mutual Adaptation</u>: tech grows to comply with existing law; law adapts to new technology**

- **<u>Mutual access</u> points for regulation: ISPs, Miners (electricity use; exchange of coins vs movability); core software developers (install backdoors vs weakens security); users (deanonymization tech)**

- **Software needs to be encircled by legal principles**
  - **Delinquent in payments: smart contract locks home or kills auto engine**

- **Blockchain and privacy law (GDPR)**

AI as Legally Disruptive

Types of Legal Responses

- **Coherent: Fitting of New Technologies into Existing Law**

- **Need to Change Law to Confront New Technology (specialized rules and regulation)**

- **Technocratic: Regulation of Product Design & Automation of Processes**

  - **Technology Incorporate Protections *Ex Ante***

  - **Co-opting New Technologies as Regulatory Instruments**

  - **Design & Boxing AI**

Regulating Code: Fallacy of Anonymity

- **Existing Law**

  – **Obscenity law: de facto deregulation of adult obscenity; focus on child pornography**

- **Avoiding Regulation**

  – **Argentina banned credit card payments for Uber > Bitcoin**

  – **Peer-to-Peer file shaving (copyright law): does it reach the level of systemic problems?**

- **RegTech: compliance monitored though code**

- **Government as node**

- **Pro-Regulation**

  – **Creates legitimacy, certainty, customer confidence**

Power of AI: Enhancing Lawyer's Work

- **Legal Research**

  - **Find cases, rank cases, find trends in cases, find reasoning of individual judges**

- **E-discovery**

- **Document Review & Contract Drafting**

- **Predictive Analytics**

- **Measuring Performance**

- **Interpreting Smart Contracts**

- **Legal Education & Judicial skill-sets**

- **European Notaries and the Blockchain**

Robot Lawyer

- **Decomposition of lawyer and judge tasks**

- **Lawyer Tasks: legal research, legal analysis & strategy, due diligence, document drafting & management, document review, fact investigation, advising clients, negotiation, court preparation & appearances**

- **Law-abiding Robots: programmed to recognize laws applicable to given situation**

- **Robots as Lawmakers: drafting statutes & regulation**
    - **Standard: 'only' better than humans**

- **Human Action as Negligence (delict)**
    - **Self-Driving Automobiles:**
    - **Reasonable person to reasonable computer standard**

Judges & Lawyers

- **AI (intelligence augmentation) to General Intelligence to Superintelligence**

  – **Reverse-engineering the human brain**

- **Internet Courts & Tamper-proof evidence;**

- **Smart Arbitration Clauses & ODR (no lawyers)**

- **Judicial Blockchain Platform (transmission of evidence; Evidence Storage Platform; secured links to police)**

- **Legal Ethics**

  – **ABA Code of Conduct: "Competency" includes assessing "the benefits and risks associated with relevant technology."**

Robo-Judges

- **Dependent on reaching general intelligence or superintelligence**

- **De-judicialization**

    - **From AI-assisted ADR to Machine Arbitrators**

- **Algorithmic Bias: $1 billion NFL Settlement**

    - **'Race norming': assumes Black men start with lower cognitive skill**

- **Trade-off: AI Cognitive Ability v. Human Emotions**

- **Possibility: Virtual Robot Judges with Appeal to AI-assisted Human Judges.**

Legal Ethics

- **Duty of Competence & Due Diligence**
  - **'Black box' Problem**
  - **Bias & Discrimination**
  - **Delegating legal work to AI-powered programs**
    - **Underutilization/overutilization**
- **Client Confidentiality**
  - **Data Breaches & Cybersecurity**
    - **Response Policy**

Legality of Legal Tech

- **Germany: Federal Lawyer's Act**

  - **Lawyers have monopoly on legal services**

  - **Does this include extrajudicial legal services & legaltech?**

  - **Legal Tech is is Interdisciplinary Activity**

    - **Working with Third-Parties?**

    - **Third-Party Funding**

    - **Non-Lawyer Partners**

- **UK: Legal Services Act**

  - **Law Firms can be owned by Non-Lawyers**

  - **Law Firms can be managed by non-Lawyers**

  - **Law firms may obtain outside financing**

Future: Artificial Intelligence

- **Super Smart Contracts**

- **Dumb Data Problem**

- **Alignment Problem**
  - **AI may "think" it knows what you want, but does it really?**
  - **How does AI capture behavioral biases and human emotions (intangibles)?**

- **AI & Democratic Institutions**
  - **"Take over of the Robots"**

- **Interdisciplinarity is only Real Solution**