INSURING EMERGING RISKS FROM AI

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Source: Gabriel Weil, Matteo Pistillo, Suzanne Van Arsdale, Junichi Ikegami, Kensuke Onuma, Megumi Okawa and Michael A. Osborne (2024)

Why insurance matters for AI

1. **Promotes Adoption**
   - Helps manage risky investments
   - Enables smaller players to innovate
2. **Promotes Social Benefits**
   - Incentivizes responsible development
   - Shares risks across society
     (especially if insurance becomes mandatory)

Who is insurable?

1. **AI Developers**
2. **AI Providers**
3. **AI Users**
4. **Third Parties**

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What is insurable?

- **Capabilities Failure**: System performance shortfalls
- **Alignment Failure**: Goal misalignment
- **Misuse**: Malicious exploitation

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- **Tangible costs**: Physical damage, injury
- **Intangible costs**: Data loss, reputation damage

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We focus on three domains:

1. Autonomous Vehicles
2. AI Agents
3. Cybersecurity

Automotive present:

- 1.19 million people die each year due to road traffic crashes
- Liability focuses on driver negligence
- Individual insurance is mandatory

Autonomous vehicles future:

- Level 5 autonomous vehicles predicted by 2035??
- Liability likely to focus on manufacturer product liability
- Reduced accident frequency
- Smaller market for insurance

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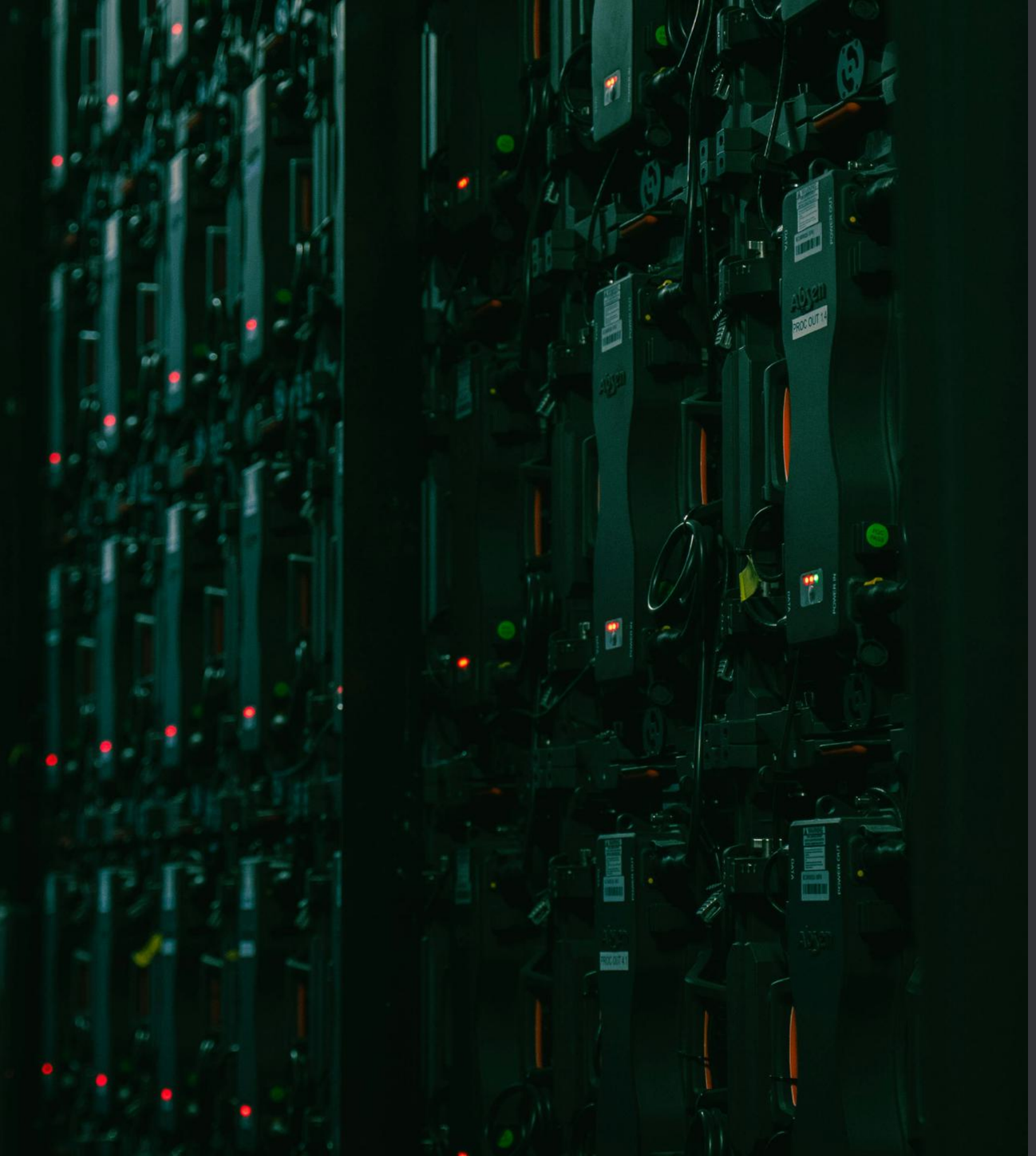
An AI agent is defined by:

- Autonomous decision-making
- Complex workflow execution
- Wide-ranging capabilities

Many implications for insurance:

- Novel liability frameworks
- High variance risk profiles
- Potential catastrophic scenarios

"I divide the entire set of Fortune Global 2000 firms into two categories: those that know they've been compromised and those that don't yet know."
- Dmitri Alperovitch



AI will change cyber attacks

- Sophistication: AI automates personalised attacks & vulnerability discovery
- Scale: AI makes attacks cheaper and faster
- Access: Democratizes advanced attack capabilities

AI is vulnerable to cyber attacks

- Model theft (worth $10M+)
- Training data extraction
- Critical infrastructure control

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Legal frameworks must change

- Autonomous Vehicles: Shift from driver negligence to manufacturer liability, possible easing of standards if AVs prove safer
- AI Agents & Cyber: possible new strict liability regimes, mandatory insurance requirements, punitive damages for "near miss" cases, vicarious liability for AI actions
- Timeline: gradual evolution through courts, potential acceleration via legislation, different jurisdictions likely to diverge

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The risk landscape will change

1. **Opacity**: complex, poorly-understood, failure modes
2. **Rapid Change**: technological uncertainty, evolving threat landscape
3. **Correlation**: concentrated supplier base

Insurance firms should change

1. Develop AI risk assessment methods
2. Create specialized AI insurance products
3. Address silent AI exposure
4. Support liability reform

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1. Insurance is critical for safe AI adoption
2. Traditional insurance markets (e.g. auto) face disruption, while new markets are emerging (e.g. agents, cybersecurity)
3. Legal frameworks are rapidly developing
4. The future of AI safety may well hinge less on the developer’s code than on the actuary's spreadsheet