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Ethical Issues Posed by Artificial Intelligence

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Purpose

- Overall purpose: To identify and begin to analyze the legal and ethical issues posed by Artificial Intelligence and related technologies
  - To provide a broad perspective on Artificial Intelligence (AI) so we can better understand its impact today and tomorrow, the assumption being
  1. We can't begin to understand the legal and ethical implications of the subject without the big picture
  2. We need historical perspective, high-level understanding of technology, and some AI background to understand the legal and ethical issues posed by the technological future which is inevitable

- To interest you in learning more about this critical topic so that you can prepare to use new technologies and begin to understand and analyze the AI legal and ethical issues which industry will expect us to master

AI Definition: How is it Different

In traditional computing, you give the computer a task, and the instructions to complete that task (in the form of a software program), and the computer does that task for you exactly the way you told it to.

With AI, you design an algorithm that enables the computer to figure out how to do what you want it to do, and the the computer learns how to accomplish its task on its own, often learning things you don't understand and didn't anticipate, sometimes without your knowledge, using data it obtains from whatever sources available, or from whatever data sources it figures out how to access.

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Unprecedented Multi-Disciplinary Industry

- Engineers
- Scientists
- Mathematicians
- Cognitive Scientists
- Neurologists
- Philosophers
- Regulators
- Executives
- Politicians
- Lawyers
- CXOs

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Key Terminology

Narrow AI = Task specific

General AI (AGI) = Begins to comprehend everything

Machine Learning = Narrow AI algorithm

Deep Learning – More powerful machine learning

Machine Vision = Visual AI

Superintelligence = AGI combining all intelligence in the universe

Singularity = AGI that creates accelerated superior versions of itself

Neural Network = Alternative form of CPU more like human mind

Bot = Software robot

Robot = Physical robot

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# The Simple Truth About AI Applications in All Businesses Today

A		B
Picture	→	Is it you?
Loan Application	→	Will they pay?
Ad Info	→	Will you click?
Audio	→	Transcript
English	→	French
Image/Radar	→	Other cars?
NDA	→	Is it correct?

Source: MIT, The State of Artificial Intelligence, Andrew Ng, Dec 15, 2017

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'Jennifer Aniston Neuron'

Source: *Rodrigo, Quian Quiroga, Scientific American on February 1, 2013/ Quartz, July, 2016*

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If we compress 4.5 billion years into one calendar year
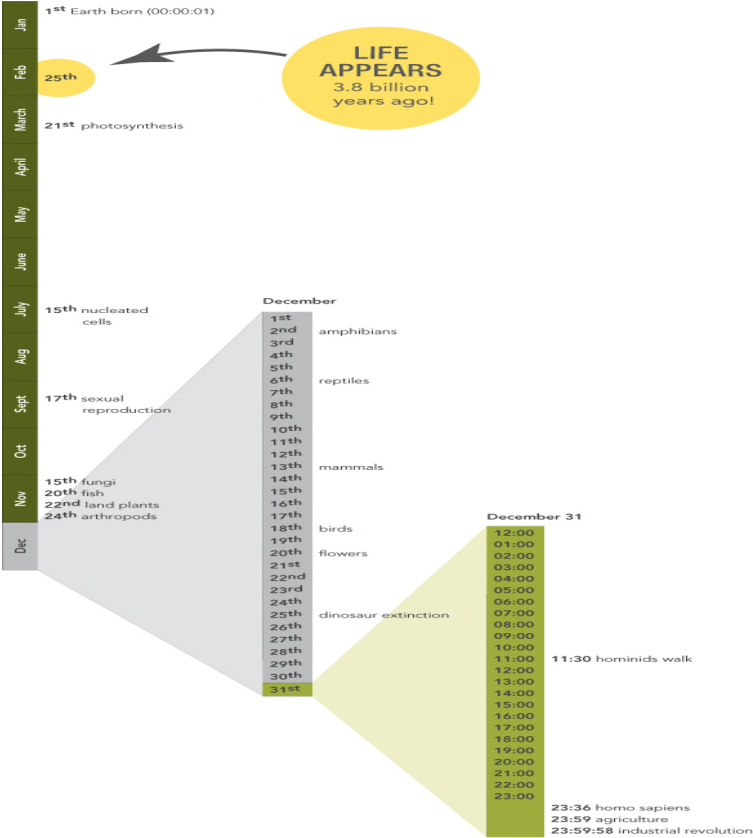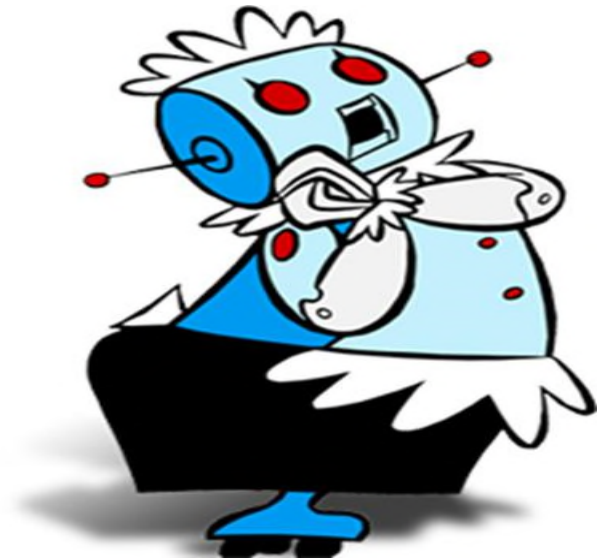

Source: BioMimicry 3.8

According to IBM

90%
of all the data in the world

was created in the last **2** years.
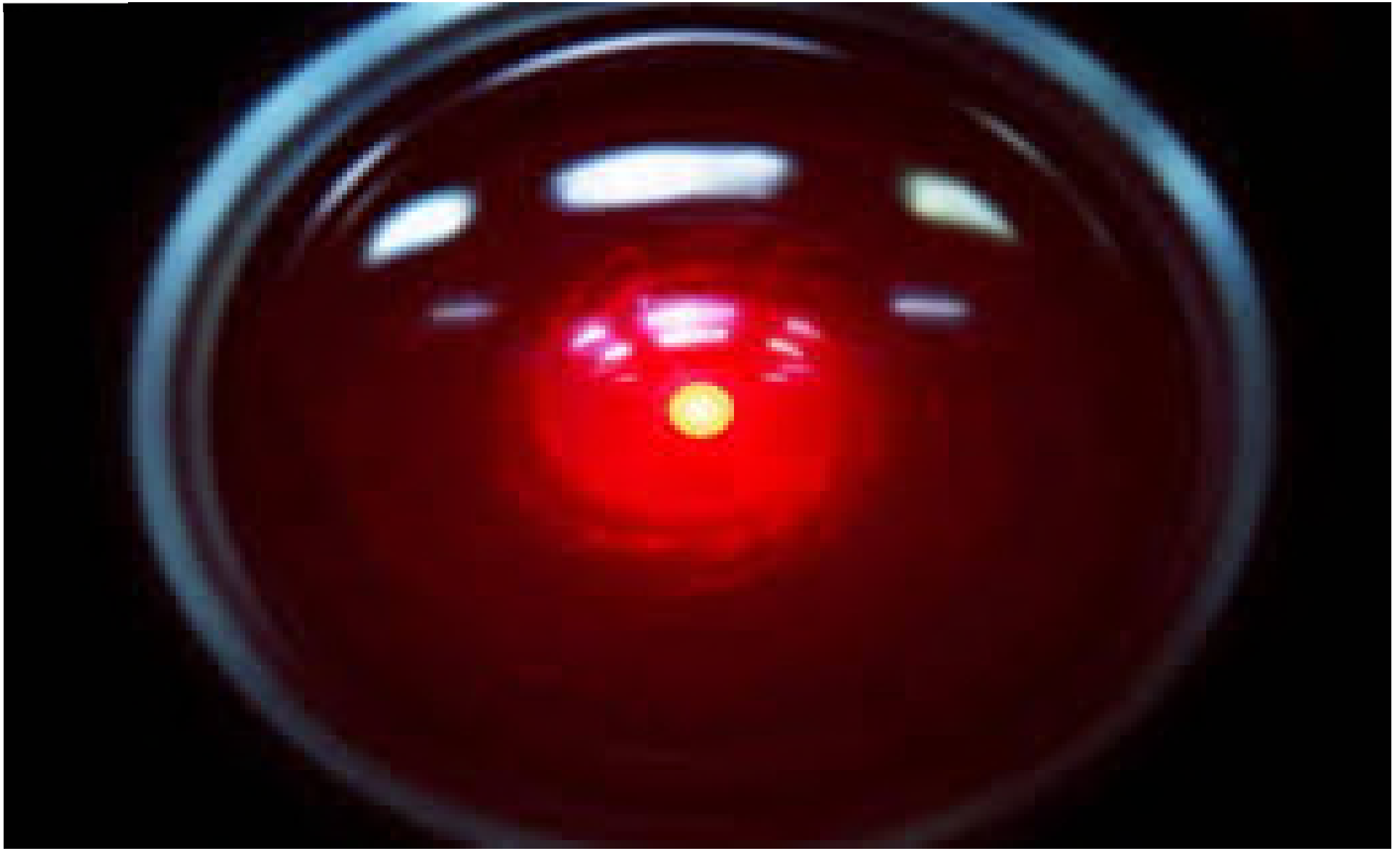
Source: ABA Journal and IBM, 2017

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AI Pioneers

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The Jetsons: Rosie the Maid (1962)

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2001: HAL-9000 (1968)

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The Terminator (1984)

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Star Trek Next Generation: Data (1994)

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And Then There Was Watson (2011)

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Watson was a Voracious Reader

Watson could essentially read 200 million pages of unstructured and structured data in a few seconds– that's about one million books.

Source: IBM, 2011

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Alpha Go (2017) Analyzed More Options Than Atoms in the Known Universe
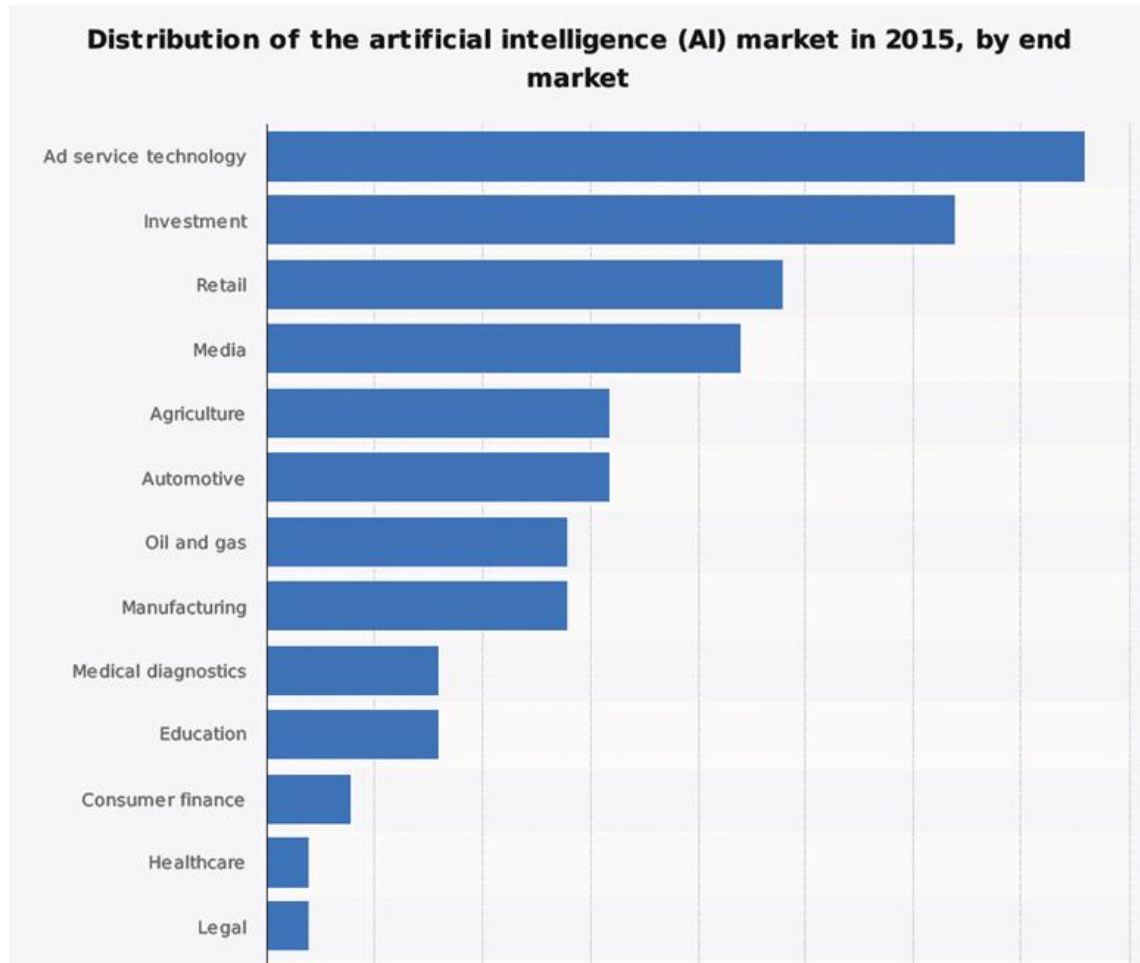

Source: Epic Math Battles: Go Versus Universe, Scientific American, May 19, 2016

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Ten Quadrillion Vigintillion, One-Hundred Thousand Quadrillion Vigintillion Atoms in the Observable Universe

1,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000

Source: Universe Today, July 30, 2009

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AI Spend by Industry

Distribution of the artificial intelligence (AI) market in 2015, by end market

Industry	
Ad service technology	
Investment	
Retail	
Media	
Agriculture	
Automotive	
Oil and gas	
Manufacturing	
Medical diagnostics	
Education	
Consumer finance	
Healthcare	
Legal	

484% increase in legal technology patents over the past five years
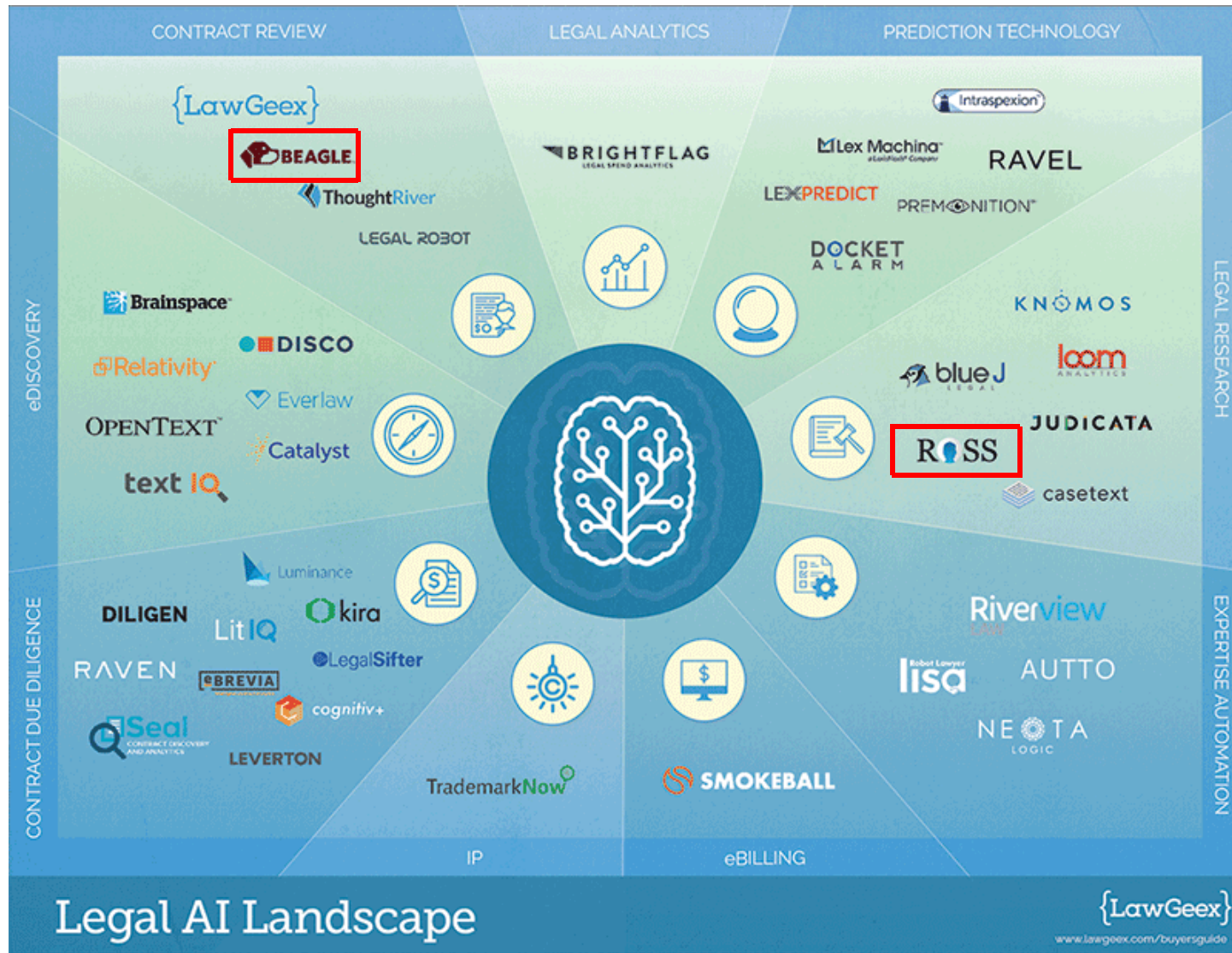
Source: *Statista,* 2015

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AI Adoption in the Legal Industry

92.5% of lawyers don't use AI

and # 7.5% do.

Source: Altman Weil, Law Firms in Transition, March/April, 2017, Sample size almost 400, statistically significant

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Legal AI Landscape

Source: Jonathan Marciano, Automating the Law, A Landscape of Legal AI Solutions, *TOPBOTS*, June, 2017

Key AI Benefits to Legal Industry

Save time

Save money

Assess risk

Increase quality

Enhance creative analysis and persuasive precedents

Improve client relations

Support new pricing models

Source: Law Technology Today, July 13, 2017

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McKinsey&Company

23% of the work lawyers do

and 35% of the work paralegals do

will be automated in the next few years.

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J.P.Morgan

Contract Intelligence (COIN) takes **360,000** hours of human labor

and handles it in **3** seconds

Source: Bloomberg Markets, February 27, 2017

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Microsoft

Microsoft's legal department saves

$4.5 million a year

through its eDiscovery system.

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Planes are Flying Themselves Now

The average amount of time that a human pilot flies a commercial airliner:

7 minutes   for a Boeing

and **3.5** minutes for an Airbus.

Source: Planes Without Pilots, John Markoff, The New York Times, April 6, 2015

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Robot lawyer - Newsweek

Newsweek

ROBOT LAWYER OVERTURNS $4 MILLION IN PARKING TICKETS

BY **ANTHONY CUTHBERTSON** ON 6/29/16 AT 6:42 AM

Source: *Newsweek*

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AI Bots Raise Enormous Ethical Questions

This raises obvious ethics questions involving a non-lawyer using AI to replace lawyers. But what are our own obligations and what are governments doing to address the issues posed by AI?

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Overall Professional Ethical Guidelines

1. Transparency

2. Predictability

3. Tamper-Proof

4. Accountability

Real Life Examples:

- Bank used AI algorithm to review and approve mortgages; sued for racial discrimination

- AI-powered app guessing ethnicity based on name

- Compas system now being used in 13 states to predict recidivism and it has been proven biased against African-American by ProPublica

Dangers are obvious

Source: *The ethics of artificial intelligence*, Nick Bostrom, Prof in the Faculty of Philosophy at Oxford Univ. and Director of the Future of Humanity Institute and Eliezer Yudkowsky, Research Fellow at the Machine Intelligence and Research Institute

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American Bar Association (ABA) Model Rule of Professional Conduct 1.1 Competence

- A lawyer shall provide competent representation to a client. Competent representation requires the legal knowledge, skill, thoroughness and preparation reasonably necessary for the representation.

- Comment 8 on Rule 1.1

- **To maintain the requisite knowledge and skill, a lawyer should keep abreast of changes in the law and its practice, including the benefits and risks associated with relevant technology**, engage in continuing study and education and comply with all continuing legal education requirements to which the lawyer is subject.

- **Illinois Rules of Professional Conduct, 1.1, Maintaining Competence** [8] **To maintain the requisite knowledge and skill, a lawyer should keep abreadst of … <u>the benefits and risks associated with relevant technology</u>** (amended October 15, 2015)

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ABA Model Rule of Professional Conduct Rule 1.1 Competence

- The legal industry has lagged behind. Comment 8 (technology) to Rule 1.1 (Competence) was just recently added in 2012.

- Competent representation of clients will ultimately require sufficient knowledge of AI to advise and supervise regarding its use and its benefits and risks (potential liability).

- This can, of course, include the use of other attorneys and vendors who are specialists.

- Rule 1.1, Comment 8, and Illinois Rule 1.1[8] are written generally; the lawyer's duty will evolve as technology advances.

- We need not be AI specialists but, as with electronic discovery, we will need sufficient understanding to provide competent representation in transactions and litigation.

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ABA Model Rule of Professional Conduct 2.1 Advisor

- In representing a client, a lawyer shall exercise independent professional judgment and render candid advice. **In rendering advice, a lawyer may refer not only to law but to other considerations such as moral**, economic, social and political **factors, that may be relevant to the client's situation**.

Preamble to Illinois Rules of Professional Conduct

- Within the framework of these Rules, … many difficult issues of professional discretion can arise. Such issues must be resolved through the exercise of sensitive professional and moral judgment guided by the basic principles underlying the Rules.

- **Needless to say, the rendering of ethical legal advice in the context of AI in the future will involve much more than purely legal analysis.**

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Comments 2 and 4 to ABA Model Rule of Professional Conduct 2.1

- Advice couched in narrow legal terms may be of little value to a client, especially where practical considerations, such as cost or effects on other people, are predominant. Purely technical legal advice, therefore, can sometimes be inadequate. **It is proper for a lawyer to refer to relevant moral and ethical considerations in giving advice. Although a lawyer is not a moral advisor as such, moral and ethical considerations impinge upon most legal questions and may decisively influence how the law will be applied.**

- Where consultation with a professional in another field is itself something a competent lawyer would recommend, the lawyer should make such a recommendation. At the same time, a lawyer's advice at its best often consists of recommending a course of action in the face of conflicting recommendations of experts.

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ABA Model Rule of Professional Conduct 1.6 Confidentiality Of Information; Illinois Rule 1.6(e)

- (c) A lawyer shall make reasonable efforts to prevent the inadvertent or unauthorized disclosure of, or unauthorized access to, information relating to the representation of a client. Illinois Rule amended 10-2015.

Every aspect of the use of AI may intersect with the lawyer's duty of confidentiality

- Vendor sophistication and data protection

- Ownership of information

- Protection of confidential information in dealings with vendors

- Security measures

- Termination of relationship

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Comment 18 to ABA Model Rule of Professional Conduct 1.6; Comment 18 to Illinois Rule 1.6(e)

- 1. Lawyer must safeguard client information relating to the representation of a client against unauthorized access by third parties

- 2. Lawyer must make reasonable efforts to prevent the access or disclosure

- 3. Factors to be considered in determining the reasonableness of the lawyer's efforts include but are not limited to:
  - the sensitivity of the information
  - the likelihood of disclosure if additional safeguards are not employed
  - the cost of employing additional safeguards
  - the difficulty of implementing the safeguards
  - and the extent to which the safeguards adversely affect the lawyer's ability to represent clients

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ABA Model Rule of Professional Conduct 5.3 Responsibilities Regarding Nonlawyer Assistance

- With respect to a non-lawyer employed or retained by or associated with a lawyer:

- (b) a lawyer having direct supervisory authority over the non-lawyer shall make reasonable efforts to ensure that the person's conduct is compatible with the professional obligations of the lawyer. …

- Also Comment to Illinois Rule 5.3 which, like other recent relevant amendments to the Illinois Rules, was amended October 2015

- In the new environment impacted by AI, exercising supervisory authority over those with AI responsibilities will be added to our existing challenges

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Current Regulatory Framework

- Unauthorized Practice of Law

- There is no uniformity in how U.S. jurisdictions define unauthorized practice of law

- Benefits of direct access to consumer (e.g. DoNotPay) but consumers making legal decisions using AI without understanding and inability to ascertain mistakes

- Lack of public protection

- Report of European Parliament Committee on Legal Affairs made Motion for Resolution with detailed recommendations to the Commission on Civil Law Rules on Robotics

- This represented the most advanced official legal thinking on the subject

Current Regulatory Framework

- Regulation is only in the "study" phase

- European Commission press release, 9 March 2018
  - Setting up group on AI to gather input and rally diverse stakeholders
  - Draft guidelines for ethical development and use of AI bases on EU's fundamental rights
  - To consider fairness, safety, transparency, future of work, and democracy

- New York City Algorithmic Accountability Bill
  - Enforcement approach originally intended
  - Instead Task Force to monitor fairness/validity of city agency use of algorithms
  - Nonetheless hailed as breakthrough

- U.S. Congress Future of AI Act: Federal advisory committee to study impact of AI on workforce, education, accountability to international regulations, legal rights, and international competitiveness
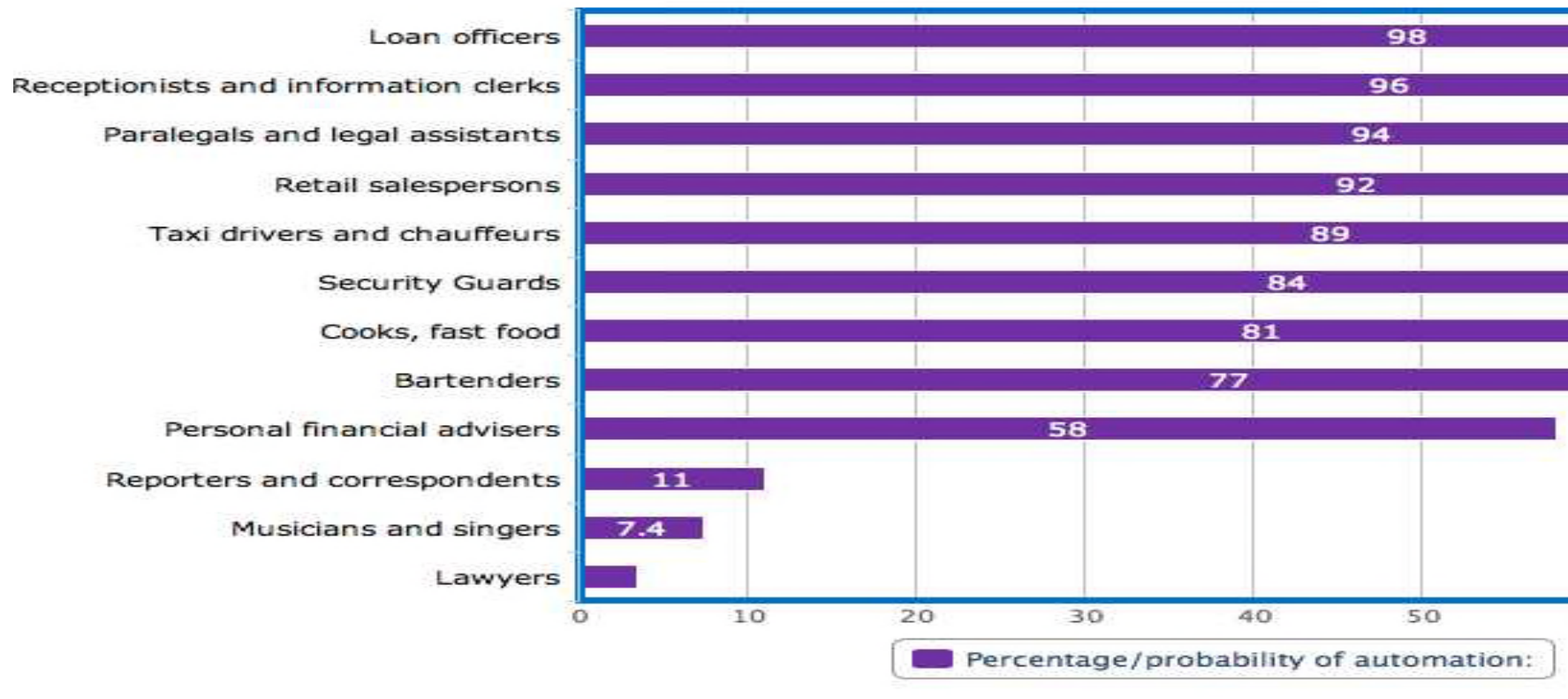
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Practical measures toward compliance with legal ethics requirements

- Maintain competence
  - Stay abreast of AI fundamentals and aware of its use in your legal practice or by your legal team

- Factor AI into your advice
  - We may not be AI specialists, but as AI continues to spread to legal technology and other products, attorneys have an ethical obligation to factor its limitations and liabilities into their advice
  - Recommend consulting outside experts as needed

- Construe confidentiality broadly
  - AI-based technologies will intersect with potentially every aspect of a lawyer's duty safeguard information and maintain confidentiality

- Exercise supervisory authority
  - Oversight of those with AI responsibilities (include non-attorneys) must include reasonable efforts to ensure their compliance with the professional obligations of the lawyer

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Predictions for How AI Will Change Work in General

- Real-time compliance analysis

- Real time coaching

- Training

- Signs of impending departure

- Marketing

- Skill identification

- Appraisal and raises

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Lawyers Unlikely to be Replaced by Robot

	Percentage/probability of automation
Loan officers	98
Receptionists and information clerks	96
Paralegals and legal assistants	94
Retail salespersons	92
Taxi drivers and chauffeurs	89
Security Guards	84
Cooks, fast food	81
Bartenders	77
Personal financial advisers	58
Reporters and correspondents	11
Musicians and singers	7.4
Lawyers	

Source: Business Insider

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Opportunities for Experienced Lawyers

AI can help experienced lawyers in many ways:

1. Create unprecedented efficiencies

2. Play a dramatically more strategic enterprise role

3. Develop new methodologies for benchmarking quality

4. Rethinking new ways to provide value

5. Get engaged in the establishment of ethical guidelines, new regulations and laws that will be required

But AI poses challenges:

1. Lawyers must adapt and become more fluent in technology and its implications

2. Lawyers must become aware of ethical implications of AI and advise clients

3. Lawyers must begin to distinguish the types of activities than can be performed better and/or more efficiently by AI and those that will continue to require humans

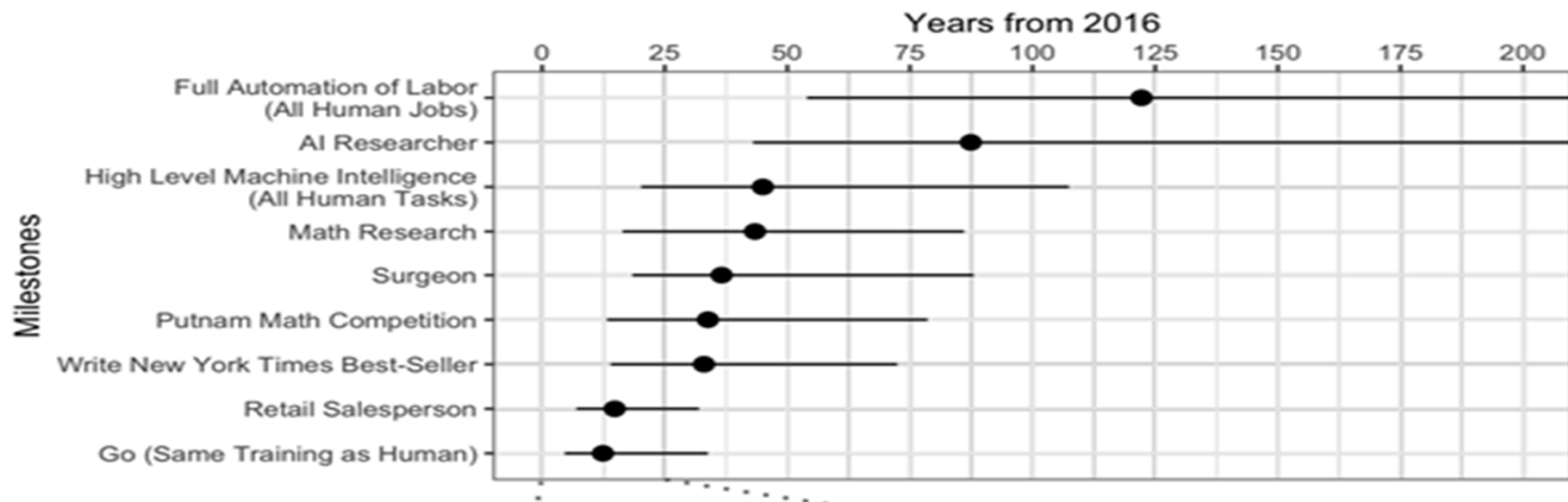"It's difficult to make predictions, especially about the future."

Niels Bohr

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Singularity Consensus

50% probability

that the singularity will occur in

45 years

Source: MIT Technology Review, May 31, 2017

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Predictions

Source: MIT Technology Review, May 31, 2017

Warnings Against AI

”I am in the camp that is concerned about super intelligence”

Bill Gates

“I agree that the future is scary and very bad for people. If we build these devices to take care of everything for us, eventually they'll think faster than us and they'll get rid of the slow humans to run companies more efficiently.”

Steve Wozniak, Apple co-founder

“I think we should be very careful about artificial intelligence. If I had to guess at what our biggest existential threat is, it's probably that.”

Elon Musk

In short, the rise of powerful AI will either be the best, or the worst thing, ever to happen to humanity. We do not yet know which.”

Stephen Hawking, Professor

Source: 11 times tech leaders warned us about artificial intelligence taking over the world, *Techworld,* Aug 2017

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In Conclusion

- The hype about AI replacing lawyers is likely overblown

- Lawyers will need to play a critical role in and around AI ethics as new regulations and laws will need to be drafted

- The creation of AI is inevitable; change is unstoppable

- Humanity has an ethical responsibility to understand and control AI

- There very well may be existential dangers of AGI that need to be taken seriously

- Creating, applying, and complying with the inevitable regulatory frameworks will be the work of lawyers

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Thank You

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