



**The Journal of Robotics,
Artificial Intelligence & Law**

Editor's Note: Cyberspace

Victoria Prussen Spears

Profit in Cyberspace?

Edite Ligere

Recent Regulatory Initiatives for Unmanned Aircraft Systems Operations

Elaine D. Solomon

**CTIA's IoT Cybersecurity Certification Program May Inform the Future of
Transportation and Smart Cities**

Renee R. Gregory and Jill Guidera Brown

California Sets the Standard with a New IoT Law

Jennifer R. Martin and Kyle Kessler

Patent Issues for AI and Factory Automation Inventions

Sameer Gokhale

Smart Transportation and Infrastructure Challenges

Eric J. Tanenblatt and Crawford Schneider

Who Is Going to Write "Smart Contracts"—The Lawyer or The Programmer?

Jacob Enoch

**Model Convention on Robotics and Artificial Intelligence: Toward International
Regulation**

Andrey Neznamov and Victor Naumov

Everything Is Not *Terminator*: Value-Based Regulation of Artificial Intelligence

John Frank Weaver

- 151 **Editor’s Note: Cyberspace**
Victoria Prussen Spears
- 155 **Profit in Cyberspace?**
Edite Ligere
- 169 **Recent Regulatory Initiatives for Unmanned Aircraft Systems Operations**
Elaine D. Solomon
- 177 **CTIA’s IoT Cybersecurity Certification Program May Inform the Future of Transportation and Smart Cities**
Renee R. Gregory and Jill Guidera Brown
- 183 **California Sets the Standard with a New IoT Law**
Jennifer R. Martin and Kyle Kessler
- 189 **Patent Issues for AI and Factory Automation Inventions**
Sameer Gokhale
- 197 **Smart Transportation and Infrastructure Challenges**
Eric J. Tanenblatt and Crawford Schneider
- 201 **Who Is Going to Write “Smart Contracts”—The Lawyer or The Programmer?**
Jacob Enoch
- 205 **Model Convention on Robotics and Artificial Intelligence: Toward International Regulation**
Andrey Neznamov and Victor Naumov
- 219 **Everything Is Not *Terminator*: Value-Based Regulation of Artificial Intelligence**
John Frank Weaver

EDITOR-IN-CHIEF

Steven A. Meyerowitz

President, Meyerowitz Communications Inc.

EDITOR

Victoria Prussen Spears

Senior Vice President, Meyerowitz Communications Inc.

BOARD OF EDITORS

Miranda Cole

Partner, Covington & Burling LLP

Kathryn DeBord

Partner & Chief Innovation Officer, Bryan Cave LLP

Melody Drummond Hansen

Partner, O'Melveny & Myers LLP

Paul B. Keller

Partner, Norton Rose Fulbright US LLP

Garry G. Mathiason

Shareholder, Littler Mendelson P.C.

Elaine D. Solomon

Partner, Blank Rome LLP

Linda J. Thayer

Partner, Finnegan, Henderson, Farabow, Garrett & Dunner LLP

Mercedes K. Tunstall

Partner, Pillsbury Winthrop Shaw Pittman LLP

Edward J. Walters

Chief Executive Officer, Fastcase Inc.

John Frank Weaver

Attorney, McLane Middleton, Professional Association

THE JOURNAL OF ROBOTICS, ARTIFICIAL INTELLIGENCE & LAW (ISSN 2575-5633 (print) /ISSN 2575-5617 (online) at \$495.00 annually is published six times per year by Full Court Press, a Fastcase, Inc., imprint. Copyright 2019 Fastcase, Inc. No part of this journal may be reproduced in any form—by microfilm, xerography, or otherwise—or incorporated into any information retrieval system without the written permission of the copyright owner. For customer support, please contact Fastcase, Inc., 711 D St. NW, Suite 200, Washington, D.C. 20004, 202.999.4777 (phone), 202.521.3462 (fax), or email customer service at support@fastcase.com.

Publishing Staff

Publisher: Morgan Morrisette Wright

Journal Designer: Sharon D. Ray

Cover Art Design: Juan Bustamante

Cite this publication as:

The Journal of Robotics, Artificial Intelligence & Law (Fastcase)

This publication is sold with the understanding that the publisher is not engaged in rendering legal, accounting, or other professional services. If legal advice or other expert assistance is required, the services of a competent professional should be sought.

Copyright © 2019 Full Court Press, an imprint of Fastcase, Inc.

All Rights Reserved.

A Full Court Press, Fastcase, Inc., Publication

Editorial Office

711 D St. NW, Suite 200, Washington, D.C. 20004

<https://www.fastcase.com/>

POSTMASTER: Send address changes to THE JOURNAL OF ROBOTICS, ARTIFICIAL INTELLIGENCE & LAW, 711 D St. NW, Suite 200, Washington, D.C. 20004.

Articles and Submissions

Direct editorial inquires and send material for publication to:

Steven A. Meyerowitz, Editor-in-Chief, Meyerowitz Communications Inc.,
26910 Grand Central Parkway, #18R, Floral Park, NY 11005, smeyerowitz@
meyerowitzcommunications.com, 646.539.8300.

Material for publication is welcomed—articles, decisions, or other items of interest to attorneys and law firms, in-house counsel, corporate compliance officers, government agencies and their counsel, senior business executives, scientists, engineers, and anyone interested in the law governing artificial intelligence and robotics. This publication is designed to be accurate and authoritative, but neither the publisher nor the authors are rendering legal, accounting, or other professional services in this publication. If legal or other expert advice is desired, retain the services of an appropriate professional. The articles and columns reflect only the present considerations and views of the authors and do not necessarily reflect those of the firms or organizations with which they are affiliated, any of the former or present clients of the authors or their firms or organizations, or the editors or publisher.

QUESTIONS ABOUT THIS PUBLICATION?

For questions about the Editorial Content appearing in these volumes or reprint permission, please call:

Morgan Morrisette Wright, Publisher, Full Court Press at mwright@fastcase.com
or at 202.999.4878

For questions or Sales and Customer Service:

Customer Service
Available 8am–8pm Eastern Time
866.773.2782 (phone)
support@fastcase.com (email)

Sales
202.999.4777 (phone)
sales@fastcase.com (email)
ISSN 2575-5633 (print)
ISSN 2575-5617 (online)

Everything Is Not *Terminator*

Value-Based Regulation of Artificial Intelligence

John Frank Weaver*

Last fall, Reuters reported that Amazon had developed a hiring tool that used artificial intelligence to review job candidates to make hiring decisions, but that the program discriminated against women.¹ Although Amazon ultimately abandoned the AI application as a mechanism to autonomously hire staff, that program represented one of the worst-case scenarios for artificial intelligence: inherent bias or discriminatory preferences baked into the AI that tainted all of the decisions and analysis performed by the AI. This problem is not occurring infrequently. A 2016 analysis of an AI risk assessment software used to determine the probability that a criminal defendant will re-offend revealed that the software disproportionately identified white offenders as a lower risk than black offenders even though their criminal histories displayed higher probabilities to re-offend.² Similarly, researchers have expressed concern that AI used to review loan applications will impermissibly rely on race by drawing connections between geographic information (which is relevant to the lender's decision) and the ethnic background of the people known to live there (which is not).³ Compounding the potential for discriminatory action is the “black box” problem: companies that develop AI programs are typically reluctant to let consumers and regulators review their code, resulting in an algorithmic black box in which decisions are made, but no one knows how or why.⁴

This column briefly discusses a few existing regulatory tools that governments can use to prevent this type of AI abuse (or at least make it harder to do) before considering how it might help to incorporate specific societal values into regulations and legislation that broadly address AI.⁵

The FTC and the GDPR

Federal Trade Commission

There is general agreement that the authority of the Federal Trade Commission (“FTC”) is broad enough to govern algorithmic decision-making and other forms of AI to some extent.⁶ Section 5(a) of the Federal Trade Commission Act establishes that “unfair or deceptive acts or practices in or affecting commerce” are unlawful.⁷ The FTC, after identifying unfair or deceptive acts or practices, may challenge such acts or practices through administrative adjudication.⁸ Alternatively, the FTC can promulgate regulations to address unfair or deceptive practices that occur widely by multiple parties in the market.⁹ Currently, the FTC’s Office of Technology Research and Investigation focuses on algorithmic transparency.¹⁰

Last year the FTC requested public comment on and scheduled hearings about algorithmic decision-making and AI.¹¹ At the hearing considering the consumer protection complications of algorithms and artificial intelligence, multiple experts discussed the regulatory possibilities that are available to the FTC:

- Explore available technical measures to “de-bias” AI products and services;¹²
- Identify what “harm” means in the context of personal data used by AI;¹³
- Encourage privacy by design;¹⁴
- Pursue consumer protection concerning AI issues assertively until limits are placed by Congress or the courts;¹⁵ and
- Create a new definition of fairness to apply to algorithmic decision-making and other AI processes.¹⁶

The problem at this point is that the FTC seems to be either reluctant to exercise these options or confused as to what to do. The request for public comment and hearings are partly intended to give the FTC feedback before exercising its regulatory power, but it also appears reluctant to use its administrative adjudication authority to identify bad actors and send signals to other companies in the market.

Having said that, however, the last two bullet points above are important ones because they introduce an aggressive conceptual

approach to legislation and regulation addressing AI, applying specific societal values to AI generally, which could avoid regulating specific technologies and impairing innovation. This issue will be addressed below.

General Data Protection Regulation

Unlike the FTC, which is relying on legislation that is not specific to AI, the European Union included requirements in the General Data Protection Regulation (“GDPR”) that explicitly refer to AI, or, in the parlance of the regulation, automated decision-making or automated processing. Article 22(1) grants data subjects the right not to be subject to a “decision based solely on automated processing, including profiling, which produces legal effects concerning him or her or similarly significantly affects him or her.”¹⁷ Consistent with that is the requirement that controllers under the GDPR, when obtaining personal data, must notify data subjects of the existence of “automated decision-making, including profiling, referred to in Article 22(1) . . . and, at least in those cases, meaningful information about the logic involved, as well as the significant and the envisaged consequences of such processing for the data subject.”¹⁸

As explained in my last column in *The Journal of Robotics, Artificial Intelligence & Law*, it is not totally clear what kind of “meaningful information” would satisfy the GDPR. Does the AI program have to incorporate “explainability,” *i.e.*, the ability to explain in real time the decision-making criteria the AI used for a recent decision? Is a lower threshold acceptable, like a “Why am I seeing this ad?” box?¹⁹ The goal is for consumers to be notified of all or nearly all of the AI applications using their personal data and for consumers to have the right to opt out if they so choose. The problem is that when that notice becomes one paragraph in a 20-page document giving consumers other notices required by law, that notice becomes meaningless and many people act like it is meaningless.²⁰ However, the societal value that each person should be able to make his or her decisions and control his or her affairs is a fundamental belief in the United States and should be extended to AI. Finding a way to establish meaningful notice of AI functions is an important value to incorporate into new regulations and legislation.

Specific Societal Values in American Regulation and Legislation

The idea that AI programs, devices, and systems need to act consistently with our values is not a novel or necessarily a controversial one.²¹ However, to this point, international and European governing groups have done a better job than their American counterparts at exploring the creation of a regulatory system to govern AI that adopts a values-based approach.²² The dominant message from the U.S. federal government has been that new widespread regulation of any sort is ill-advised for the foreseeable future and that we do not want to disrupt innovation.²³ What this fails to recognize is that the federal government will never be in a better position to impose regulations on AI; as the industry grows and becomes better organized, it will most likely resist efforts to impose regulatory obligations.²⁴ Judging by the comments to a federal request for public responses published by the White House Office of Science and Technology Policy (the “AI RFI”), that resistance is already occurring, as many commenters expressed concern for “unnecessary regulatory obstacles,” “burdensome regulations and reactionary policies that inhibit the growth of AI,” and “regulation [that] stifles . . . creative, organic, bottom-up solutions.”²⁵

We need to regulate AI now in order to set early expectations for AI developers: what should consumers reasonably expect, what processing behavior is acceptable, what information must be disclosed, etc. By setting those expectations early, we create ground rules for AI before the industry becomes too developed to oppose them. As the industry gets more mature, it will grow having internalized those rules, and everyone will be better off. Had we taken this approach with data privacy, we would see fewer growing pains as companies try to incorporate the requirements of the GDPR and other data privacy laws.²⁶

I am sympathetic to people who worry about technology-specific laws and regulations; AI is too young and too misunderstood for regulators and legislators to effectively govern it at the device or program level. However, it is important that early regulations are adopted to create requirements that all AI developers must incorporate into their applications and devices. Values-based regulations are an ideal way to do that.

The Federal Trade Commission Act is both a good example of values-based governing, with its broad language prohibiting unfair

and deceptive trade practices, and a useful tool for the FTC to leverage to adopt values-based regulation to govern AI. The FTC should pursue regulations focusing on the following values:

- *Beneficence and Confirmation*: AI developers must ensure that their applications and devices do no harm to the physical, mental, or social well-being of human beings or their communities, or they must be able to demonstrate how any harms are more than offset by benefits to the physical, mental, or social well-being of human beings or their communities. AI should be testable by third parties to confirm that it does no harm, and AI that produces more significant effects on a larger population should be subject to more scrutiny.²⁷
- *Justice and Fairness*: AI must treat people and issues fairly. Organizations that develop and/or rely on AI must ensure that it is reliable and does not make discriminatory decisions, including ensuring that historical biases in the data sets that inform an AI application are effectively recognized and accounted for by the application.²⁸
- *Respect and Honesty*: Use of AI should be transparent and made known to users. People have the right to decide whether or not to participate with an AI application, both as someone who will be affected by the AI's decision-making and as someone whose data will be relied upon to train the AI to make decisions. At the same time, the intellectual property rights AI developers have in the code should be protected.²⁹

These basic values are core American values. Broadly worded regulations based on these values would not be technology specific, but would establish a baseline of behavior and expectations for anyone seeking to develop AI applications or devices. Consistent with the opinions expressed at the FTC hearing on AI, the FTC can adopt regulations addressing these values under its current authority to prevent unfair and deceptive practices.

Having said that, courts could determine that regulations based on these values are beyond the scope of the Federal Trade Commission Act. In order to prevent that, it would be preferable that Congress pass legislation that formally authorizes the FTC to promulgate regulations that impose the above values on AI.

Conclusion

Although the degree of change is debated, the general consensus is that AI will introduce significant change to people's lives. AI is also widely recognized as incredibly tricky for government to regulate because it is very technical and difficult to understand. Various commenters responding to the AI RFI worried that: "AI can quickly become overwhelming for gov[ernment] to regulate. Our laws have no protection against the negative effects" of AI; that without regulation, AI will lead to abuses; and that the country will not be able to maximize the benefits of the technology.³⁰ Broadly applicable regulations based on specific values avoid the potential danger in technology-specific regulations while allowing the government to set the ground rules for AI before the field becomes even more technical and difficult for legislators, regulators, and public policy makers to conceptualize and govern. The FTC's pursuit of values-based regulations is the first step toward beneficial, long-term governance of AI.

Notes

* John Frank Weaver, an attorney at McLane Middleton and a member of the firm's privacy and data security practice group, is the "Everything Is Not Terminator" columnist for *The Journal of Robotics, Artificial Intelligence & Law*. Mr. Weaver, who may be contacted at john.weaver@mcclane.com, has a diverse practice that focuses on land use, real estate, telecommunications, and emerging technologies, including artificial intelligence, self-driving vehicles, and drones.

1. Jeffrey Dastin, "Amazon scraps secret AI recruiting tool that showed bias against women," *Reuters* (October 9, 2018), <https://uk.reuters.com/article/us-amazon-com-jobs-automation-insight/amazon-scraps-secret-ai-recruiting-tool-that-showed-bias-against-women-idUKKCN1MK08G>.

2. Julia Angwin, Jeff Arson, et al., "Machine Bias," *ProPublica* (May 23, 2016), <https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing>.

3. Bryce Goodman & Seth Flaxman, "European Union regulations on algorithmic decision-making and a 'right to explanation,'" 4, 6, August 31, 2016, *arXiv.org*, <https://arxiv.org/pdf/1606.08813.pdf>. For a more thorough discussion of some of the problems in algorithmic decision-making, see Katie McInnis, "The consumer welfare implications associated with the use of algorithmic decision tools, artificial intelligence, and predictive analytics,"

Consumers Union, August 8, 2018, https://www.ftc.gov/system/files/documents/public_comments/2018/08/ftc-2018-0056-d-0031-155157.pdf.

4. See Goodman & Flaxman, *supra* note 3, at 6.

5. Please note that I am purposefully referring to societal values (e.g., individuals should be able to make informed decisions; violence is bad; etc.) and *not* individual moral values (e.g., charity donations, organ donations, etc.). For more information about this distinction as applied to AI, see Amitai Etzioni & Oren Etzioni, “Designing AI Systems that Obey Our Laws and Values,” *Communications of the ACM* (Vol. 59, No. 9; 2016), 31.

6. Transcript of Competition and Consumer Protection in the 21st Century, Federal Trade Commission hearing (Howard University School of Law; November 13, 2018), 228-235, https://www.ftc.gov/system/files/documents/public_events/1418693/ftc_hearings_session_7_transcript_day_1_11-13-18.pdf (the “FTC Hearing”).

7. 15 U.S.C. § 45(a)(1).

8. 15 U.S.C. § 45(b).

9. 15 U.S.C. § 57a.

10. Office of Technology Research and Investigation Homepage, <https://www.ftc.gov/about-ftc/bureaus-offices/bureau-consumer-protection/office-technology-research-investigation>.

11. Press Release, “FTC Announces Hearings On Competition and Consumer Protection in the 21st Century,” Federal Trade Commission (June 20, 2018), <https://www.ftc.gov/news-events/press-releases/2018/06/ftc-announces-hearings-competition-consumer-protection-21st>.

12. FTC Hearing, *supra* note 6, at 244-45.

13. *Id.* at 248-49.

14. *Id.* at 251.

15. *Id.* at 243.

16. *Id.* at 244.

17. Council Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC, 2016 O.J. (L119) 1, Art. 22(1).

18. *Id.* at Art. 13(2)(f).

19. John Frank Weaver, “Everything Is Not *Terminator*: Public-Facing Artificial Intelligence Policies—Part II,” *The Journal of Robotics, Artificial Intelligence & Law* (Vol. 2, No. 2; March-April 2019).

20. See FTC Hearing, *supra* note 6, at 272.

21. See Etzioni & Etzioni, *supra* note 5, at 29-31.

22. See Mady Delvaux, *Report with recommendations to the Commission on Civil Law Rules on Robotics (2015/2103(INL))*, European Parliament Document Number A8-0005/2017, January 27, 2017, <http://www.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML+REPORT+A8->

2017-0005+0+DOC+PDF+V0//EN; Access Now & Amnesty International Joint Declaration, *The Toronto Declaration: Protecting the right to equality and non-discrimination in machine learning systems* (Toronto, May 16, 2018), <https://www.accessnow.org/toronto-declaration>.

23. National Science and Technology Council, "Preparing for the Future of Artificial Intelligence," *Executive Office of the President* (October 2016), 17, https://obamawhitehouse.archives.gov/sites/default/files/whitehouse_files/microsites/ostp/NSTC/preparing_for_the_future_of_ai.pdf; FTC Hearing, *supra* note 6, at 231-32, 242-43.

24. John Frank Weaver, "Everything Is Not *Terminator*: The Importance of Regulating AI As Soon As Possible," *The Journal of Robotics, Artificial Intelligence & Law* (Vol. 1, No. 2; March-April 2018).

25. White House Office of Science and Technology Policy, "Request for Information on the Future of Artificial Intelligence," *Public Responses*, September 1, 2016, Respondents 103, 109, & 159, <https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/OSTP-AI-RFI-Responses.pdf> (the "AI RFI").

26. See David Meyer, "In the Wake of GDPR, Will the U.S. Embrace Data Privacy?" *Fortune* (November 29, 2018), <http://fortune.com/2018/11/29/federal-data-privacy-law/>.

27. AI RFI, *supra* note 25, at Respondents 108; McInnis, *supra* note 3.

28. *Id.*

29. *Id.*

30. AI RFI, *supra* note 25, at Respondents 14, 20, & 61.