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Should Robots Prosecute and Defend?

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SHOULD ROBOTS PROSECUTE AND DEFEND?

STEPHEN E. HENDERSON*

Abstract

Even when we achieve the ‘holy grail’ of artificial intelligence—machine intelligence that is at least as smart as a human being in every area of thought—there may be classes of decisions for which it is intrinsically important to retain a human in the loop. On the common account of American criminal adjudication, the role of prosecutor seems to include such decisions given the largely unreviewable declination authority, whereas the role of defense counsel would seem fully susceptible of automation. And even for the prosecutor, the benefits of automation might outweigh the intrinsic decision-making loss, given that the ultimate decision—by judge or jury—should remain a human (or at least role-reversible) one. Thus, while many details need to be worked out, we might within decades have a criminal justice system consisting of robo-defense lawyers and robo-prosecutors. And even if we never do, their consideration provides another lens through which to consider these roles and, ultimately, our criminal justice system.

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Introduction

The more things change, the more they stay the same.

In 1956, a group of scientists proposed a summer workshop at Dartmouth:

We propose that a 2 month, 10 man study of artificial intelligence be carried out. . . . An attempt will be made to find how to make machines that use language, form abstractions and concepts, solve kinds of problems now reserved for humans, and improve themselves. We think that a significant advance can be made in one or more of these problems if a carefully selected group of scientists work on it together for a summer.¹

Well, if they work *all summer*, sure.

Such (naive) hope naturally engendered (exaggerated) concern. In 1964, President Lyndon Johnson signed legislation creating the National Commission on Technology, Automation, and Economic Progress, seeking to reassure a troubled nation that “[a]utomation is not our enemy.”² The Introduction to the Commission’s Report, delivered in 1966, acknowledged that while “[t]he vast majority of people quite rightly have accepted technological change as beneficial,” there was also ample fear:

Another concern [with technological progress] has been the apparently harmful influences of modern technology on the physical and community environment—leading to such

1. NICK BOSTROM, *SUPERINTELLIGENCE: PATHS, DANGERS, STRATEGIES* 6 (2014).

2. Lyndon B. Johnson, *Remarks Upon Signing Bill Creating the National Commission on Technology, Automation, and Economic Progress*, AM. PRESIDENCY PROJECT (Aug. 19, 1964), <https://www.presidency.ucsb.edu/node/241917>. President Johnson continued: “Our enemies are ignorance, indifference, and inertia. Automation can be the ally of our prosperity if we will just look ahead, if we will understand what is to come, and if we will set our course wisely after proper planning for the future.” *Id.*

problems as air and water pollution, . . . deterioration of natural beauty, and the rapid depletion of natural resources. Another concern has been the apparently harmful influence of urban, industrial, and technical civilization upon the personality of individual human beings—leading to rootlessness, anonymity, insecurity, monotony, and mental disorder. Still another concern, perhaps the one most responsible for the establishment of the Commission, has arisen from the belief that technological change is a major source of unemployment. . . . The fear has even been expressed by some that technological change would in the near future not only cause increasing unemployment, but that eventually it would eliminate all but a few jobs, with the major portion of what we now call work being performed automatically by machine.³

It is hardly surprising, then, that as artificial intelligence technologies continue to mature, humans continue to fret. And so we should. In his seminal book *Superintelligence*, Nick Bostrom quickly establishes that a machine ‘intelligence explosion’ could—as a matter of historical rates of production—be expected.⁴ That takes him four pages. He then spends some three hundred pages articulating countless scenarios of how it could go sufficiently wrong as to constitute an existential threat to humanity.

Thus, it is natural, and expected, that many of us are wondering what the achievement of artificial general intelligence, or AGI—meaning broad-scale, human-level machine intelligence—might mean for the practice of law.⁵ And not everyone is an optimist.

Although they ultimately conclude that “algorithmic governance” *can* satisfy the requirements of governmental transparency, Cary Coglianese and David Lehr begin a recent paper with this rather startling claim:

When Abraham Lincoln declared in 1863 that government “of the people, by the people, and for the people, shall not perish

3. NATIONAL COMM’N ON TECH., AUTOMATION & ECON. PROGRESS, TECHNOLOGY AND THE AMERICAN ECONOMY xi–xii (1966), <https://files.eric.ed.gov/fulltext/ED023803.pdf>.

4. BOSTROM, *supra* note 1, at 1–4. I do not mean to overstate Bostrom’s careful claim: It is not that historic gross world product data dictates that we *will* experience an intelligence explosion causing another rate-change in exponential growth, but rather that *if we do*, it will fit historic trends as opposed to breaking the mold. *See id.*

5. For a brief primer on artificial general intelligence, see Kiel Brennan-Marquez & Stephen E. Henderson, *Artificial Intelligence and Role-Reversible Judgment*, 109 J. CRIM. L. & CRIMINOLOGY 137, 143–45 (2019).

from the earth,” he spoke to enduring values of liberty and democracy. Today, these values appear to face an emerging threat from technology. Specifically, advances in machine-learning technology—or artificial intelligence—portend a future in which many governmental decisions will no longer be made by people, but by computer-processed algorithms.⁶

Call me a skeptic, but I don’t think the potential for robot government is akin to what was troubling Lincoln as he prepared his remarks for Gettysburg, and it requires much more subtle argument—to which Coglianese and Lehr of course move—in order to determine whether automated government might meaningfully threaten democracy.⁷

Milan Markovic has recently argued that “important policy considerations . . . counsel against replacing lawyers with intelligent machines.”⁸ First off, claims Markovic, “most human beings prefer to interact and conduct business with other humans.”⁹ I’m again skeptical. This alleged preference has not stemmed—nor even slowed—the tide of electronic commerce, nor do I see why it would differently apply to other sectors where the technology is not yet available. Plenty of humans seem to prefer even quite dumb machines as they move to electronic banking and other conveniences, and I count myself among them.¹⁰ And if I never had to visit another human doctor or dentist, what I wouldn’t pay!

More particularly for Markovic,

One consideration is largely practical. Intelligent machines pose a challenge to the dominant liability regime. If lawyers fail to deliver competent legal services to their clients, they are subject to . . . malpractice suits. . . . When lawyer robots err, who should be held responsible and compensate injured clients?¹¹

6. Cary Coglianese & David Lehr, *Transparency and Algorithmic Governance*, 71 ADMIN. L. REV. 1, 2–3 (2019).

7. See generally *id.*; see also Brennan-Marquez & Henderson, *supra* note 5, at 149–56 (arguing that democracy demands certain judgments be “role-reversible,” permitting robots a role only if they interchangeably sit on both sides of such judgments). See generally Melissa Mortazavi, *Rulemaking Ex Machina*, 117 COLUMBIA L. REV. ONLINE 202 (2017) (cautioning against over-reliance on currently available automation in administrative rulemaking).

8. Milan Markovic, *Rise of the Robot Lawyers?*, 61 ARIZ. L. REV. 325, 343 (2018).

9. *Id.* at 327.

10. See, e.g., *Survey: Online, Mobile Are Most Popular Banking Channels*, AM. BANKERS ASS’N (Sept. 21, 2017), <https://www.aba.com/Press/Pages/092117ConsumerSurveyBankingPreferences.aspx>.

11. Markovic, *supra* note 8, at 343 (footnotes omitted).

So, a lawyer's argument against robot lawyers is not knowing whom to sue when the robot lawyer proves incompetent. All lawyer jokes and American hyper-interest in litigation aside, this hardly seems unique to the practice of law. Similar liability questions arise with autonomous vehicles, yet few expect—and even fewer think it ought—to keep them off the roads. To be sure, there are fascinating questions of civil liability to be addressed,¹² but fascinating questions are little reason for preferring death and carnage, whether it take place on the roads or—more metaphorically—via terrible representation in our courtrooms. Further, in my particular area of interest—the criminal law—malpractice liability hardly takes this center stage. Instead, very few such claims are brought, let alone succeed, because anyone seeking to recover for malpractice must typically prove not only that she would have otherwise won her criminal case, but further that she is innocent of the charges.¹³

Another of Markovic's reasons for disfavoring robot lawyers is that clients "often do not have clear objectives and require assistance in shaping them."¹⁴ Markovic has no argument, however, explaining why AGI lawyers could not fulfill this function. Nor does he have arguments supporting his claims that AGI lawyers could not push back against unethical clients,¹⁵ would lack emotional intelligence and moral authority,¹⁶ would be unable to

12. See generally Roger Michalski, *How to Sue a Robot*, 2018 UTAH L. REV. 1021 (arguing for a *sui generis* robot liability regime, but one that benefits from much that has come before); Mark A. Lemley & Bryan Casey, *You Might Be a Robot*, CORNELL L. REV. (forthcoming) (stressing how difficult it is to delimit what constitutes a robot); Bryan Casey, *Robot Ipsa Locquitur*, GEO. L.J. (forthcoming) (arguing traditional negligence is suited to the task); Andrew D. Selbst, *Negligence and AI's Human Users*, B.U. L. REV. (forthcoming) (arguing 'not so fast'); Omri Rachum-Twaig, *Whose Robot Is It Anyway?: Liability for Artificial-Intelligence-Based Robots*, 2020 U. ILL. L. REV. (forthcoming) (arguing for some "supplementary rules"). Again, there are indeed fascinating questions to be answered!

13. See BENJAMIN H. BARTON & STEPHANOS BIBAS, REBOOTING JUSTICE: MORE TECHNOLOGY, FEWER LAWYERS, AND THE FUTURE OF LAW 89–90 (2017) (explaining these and other limitations); J. Vincent Aprile II, *Exonerating Criminal Defense Attorneys from Civil Malpractice*, CRIM. JUST., Spring 2019, 42–44 (expanding upon the same).

14. Markovic, *supra* note 8, at 344.

15. See *id.* at 346. "One especially vital responsibility of attorneys is to push back against clients' unlawful and misguided ends. In this regard, the lawyer is a gatekeeper who functions as a 'buffer between the illegitimate desires of his client and the social interest.'" *Id.* (citation omitted). Again, call me skeptical.

16. See *id.* at 346. This is not to deny that others have made important claims in this regard. In addition to that cited by Markovic, see the sources cited *infra* notes 43, 45.

explain themselves,¹⁷ or would “flood real (or virtual) courts with unsustainable claims, with harried [human?] judges left to separate the wheat from the chaf[f].”¹⁸

In short, Markovic’s claims seem to sound in speciesism, preferring human decision-making *because* it is human, not because it is in any meaningful way superior.¹⁹ Most relevant to my inquiry, he makes the following claim about criminal prosecution: “[P]rosecutors do not merely seek convictions on behalf of the state; they are required to ensure that the accused is ‘accorded procedural justice’” (quoting the ABA Model Rules).²⁰ Yes, they are so ethically obliged. Do they consistently fulfill that obligation? Hardly.²¹ Thus, we cannot merely presume that AGI prosecutors would do worse.²²

All of which raises the question: *Is* there reason to think AGI lawyers could never serve as prosecutors or defense counsel? What follows is a preliminary interrogation. First, Part I comments upon the search for AGI and upon methodology: because we lack all relevant details of the technology, we cannot focus upon the robot lawyer, nor imagine for her limitations that she might not have. Instead, we must begin with the current human substantiation, attempting to define its role. Part II thus looks to the American prosecutor and criminal defense lawyer, and Part III asks whether there is anything about either one for which human decision-making is intrinsically important. My initial conclusion is that there seems to be no such need for criminal defense, but that there might be for prosecution,

17. See Markovic, *supra* note 8, at 347. Markovic does not address questions of explainable AI, *see, e.g.*, Brent Mittelstadt et al., *Explaining Explanations in AI*, in FAT* '19: PROCEEDINGS OF THE CONFERENCE ON FAIRNESS, ACCOUNTABILITY, AND TRANSPARENCY 279 (ACM Publ'ns 2019), <https://doi.org/10.1145/3287560.3287574>, let alone take time to differentiate the many ways we might achieve artificial general intelligence, each of which is critically—and uniquely—different from the machine learning of today, *see, e.g.*, BOSTROM, *supra* note 1, at 26-62.

18. Markovic, *supra* note 8, at 347.

19. To be clear, Markovic’s claims surely hold for the technologies of today. My dispute is with the claim that they would similarly apply to those of AGI.

20. *Id.* at 345 (quoting MODEL RULES OF PROF'L CONDUCT r. 3.8. cmt. 1 (AM. BAR ASS'N 2018)).

21. *See, e.g.*, Jonathan Rapping, *Who's Guarding the Henhouse? How the American Prosecutor Came to Devour Those He Is Sworn to Protect*, 51 WASH. L. J. 513, 529-38 (2012).

22. In interrogating the potential for judicial robots and other law-related automation, Eugene Volokh proposes a “Modified John Henry Test” “in which a computer program is arrayed against, say, ten average performers in some field.” Eugene Volokh, *Chief Justice Robots*, 68 DUKE L.J. 1135, 1138 (2019).

even if—as is ever the case—instrumental gain should be weighed against any such intrinsic value.

I. Begin with the Humans

The search for artificial general intelligence is decades-old and is as complicated and contested as it is fascinating.²³ But, very briefly, *what* is it and *when* might we have it? Physicist and AI-enthusiast Max Tegmark helps with both questions.

Tegmark divides life on earth into three stages.²⁴ In the first, *Life 1.0*, life evolved to better survive and replicate, and such organisms of course continue to slowly evolve over many generations.²⁵ They are in a sense amazing, but they are also rather ‘dumb’: the bacterium knows just as much on the day it is born as on the day it will die.²⁶ Thus, in the second stage, *Life 2.0*, creatures—foremost among them we humans—brought something new: the capacity to learn, or, as Tegmark puts it, to “design [our] software.”²⁷ The brain of a human baby is dangerously low on what we would consider commonplace knowledge, but, thankfully, stock full of potential to learn.²⁸ So far so good. What can’t we do? Design our own hardware. Despite some improvements—a new knee here or a new heart valve there—we remain essentially tethered to a biologically-marvelous-yet-limited body that will die on us in a relatively short time, and that can only be moderately improved by exercise, training, and known methods of surgery. Thus, *Life 3.0*, “which doesn’t yet exist on Earth, [will] dramatically redesign not only its software, but its hardware as well.”²⁹ And this is, in a nutshell, the goal of—or, more properly said, a prominent goal of—AI: to develop a human-level and human-breadth intelligence (AGI)

23. For a description of AGI including citations to its key works, see Brennan-Marquez & Henderson, *supra* note 5, at 143–45.

24. MAX TEGMARK, *LIFE 3.0: BEING HUMAN IN THE AGE OF ARTIFICIAL INTELLIGENCE* 24–30 (2017).

25. *Id.* at 25–26.

26. *Life 1.0* is “life where both the hardware and software are evolved rather than designed.” *Id.* at 27 (emphasis omitted).

27. *Id.* at 26 fig. 1.1. *Life 2.0* is “life whose hardware is evolved, but whose software is largely designed.” *Id.* at 27 (emphasis omitted).

28. That “the synaptic connections that link the neurons in [our brains] can store about a hundred thousand times more information than the DNA that [we are] born with,” allows not only different and more nimble intelligence, but greater intelligence. *Id.* at 28.

29. *Id.* at 26 fig. 1.1.

that will not be hampered by the ‘hardware’ limitations of slow biological evolution.³⁰

When will this happen? On a *Life 1.0* to *3.0* timescale, in the blink of an eye.³¹ But few of us tend to think on cosmic timescales, so how long might it take in more common measurements? There is robust disagreement, ranging from the “techno-skeptics” who think we will not reach AGI for a century, if ever, to the optimistic few who think it might happen very soon.³² Many believe we are looking at somewhere between a few decades to a century.³³ So, it is not too early to begin to consider AGI’s criminal justice role.³⁴

How might this revolution come about? We really have no idea. Or, perhaps better said, we have *too many* ideas. It might be through a ‘child machine’ imagined by Alan Turing that ‘grows up’ through some form of directed or nudged—and hopefully much speedier—evolution.³⁵ It might be via “whole brain emulation” or “uploading,” in which scientists replicate

30. See *id.* at 30, 39 tbl. 1.1. “The holy grail of AI research is to build ‘general AI’ (better known as *artificial general intelligence*, AGI) that is maximally broad: able to accomplish virtually any goal, including learning.” *Id.* at 52. Nick Bostrom describes AGI like this: “Machines matching humans in general intelligence—that is, possessing common sense and an effective ability to learn, reason, and plan to meet complex information-processing challenges across a wide range of natural and abstract domains” BOSTROM, *supra* note 1, at 4.

31. TEGMARK, *supra* note 24, at 29–30. Tegmark explains:

After 13.8 billion years of cosmic evolution, development has accelerated dramatically here on Earth: *Life 1.0* arrived about 4 billion years ago, *Life 2.0* (we humans) arrived about a hundred millennia ago, and many AI researchers think that *Life 3.0* may arrive during the coming century, perhaps even during our lifetime

Id. (emphasis added).

32. See *id.* at 30–33, 40–42.

33. See *id.* at 30–33, 40–42; BOSTROM, *supra* note 1, at 22–25. Two early waypoints of particular relevance to lawyers have been machine learning systems outperforming attorneys in certain tasks (especially in document review) and correctly predicting judicial outcomes. See Erin Winick, *Lawyer-Bots Are Shaking Up Jobs*, MIT TECH. REV. (Dec. 12, 2017), <https://www.technologyreview.com/s/609556/lawyer-bots-are-shaking-up-jobs/> (document review); Nikolas Aletras et al., *Predicting Judicial Decisions of the European Court of Human Rights: A Natural Language Processing Perspective*, PEERJ COMPUTER SCI. 2:e93 (Oct. 24, 2016), <https://peerj.com/articles/cs-93/>.

34. As Kiel Brennan-Marquez and I have previously noted, any objection that such planning is futile—i.e., AGI will very quickly lead to overwhelming superintelligence that will override any such plans—would prove too much. See Brennan-Marquez & Henderson, *supra* note 5, at 145.

35. See BOSTROM, *supra* note 1, at 27–35.

the computational structure of our own gray matter.³⁶ It might be by improving the human brain,³⁷ by interfacing with the human brain,³⁸ or by some linkage between multiple human brains.³⁹ Or it might be something entirely different. And not knowing the mechanism by which AGI will be achieved, we cannot know the form or manner that intelligence will take. Perhaps it will merely be improvement upon our own manners of thinking, or perhaps it will be something very different. We are fundamentally hampered in imagining AGI because we know of only a single form of high intelligence—our own—and because we know eerily little about even it.

We therefore cannot begin with the (unknowable) robot. While we might ponder whether robots should be subjected to our criminal law,⁴⁰ we now see this is an impossible question to answer. While long-evolved doctrines of *actus reus* and *mens rea* might work for the human brain—or might not if neuroscience really throws us a curve!⁴¹—they might be fundamentally unworkable for an entirely different manner of intelligence. We first need to know the form or forms of that intelligence, and *then* we can meaningfully ponder its criminal law. Thus, we ought to start *not* with the intelligent machines, but rather with *us*. Is there something intrinsically important about human decision-making, perhaps in certain spheres? Kiel Brennan-Marquez and I have previously argued that there is: criminal judgments in an appropriately democratic society should be “role-reversible,” in that those making the judgment ought to be susceptible, reciprocally, to the impact of decisions.⁴² We should only have robo-jurors, then, if we likewise interchangeably have robo-defendants.

36. *See id.* at 35–43.

37. *See id.* at 43–54.

38. *See id.* at 54–58.

39. *See id.* at 58–60.

40. *See, e.g.*, Ying Hu, *Robot Criminals*, 52 U. MICH. J. L. REFORM 487 (2019) (arguing we should sometimes criminally punish AI); Ryan Abbott & Alex Sarch, *Punishing Artificial Intelligence: Legal Fiction or Science Fiction*, U.C. DAVIS L. REV. (forthcoming) (arguing that such criminal punishment would be morally defensible but not an ideal solution).

41. What might be most important about a human system of criminal justice is that humans perceive it to be basically legitimate. *See, e.g.*, Douglas Husak, *What Do Criminals Deserve?* in LEGAL, MORAL, AND METAPHYSICAL TRUTHS: THE PHILOSOPHY OF MICHAEL S. MOORE 3 (Kimberly K. Ferzan & Stephen J. Morse eds., 2016) (“Here, then, is the legitimate place of crime-reduction in a theory of justified punishment: it provides the most important rationale for creating institutions that treat persons as they deserve.”).

42. *See generally* Brennan-Marquez & Henderson, *supra* note 5.

It is worth pausing to emphasize that when I speak of AGI—and when Kiel and I speak of role-reversible AGI—we *really mean* AGI: a computer intelligence at least as smart as a human across the *entire* topology of human intelligence. If, say, Joshua Davis is correct that intelligent machines are not likely to achieve the subjective/conscious experience,⁴³ then they are not yet as intelligent as humans when it comes to philosophy, and they quite obviously could not engage in generic reasoning triggered by a ‘but for the grace of god there go *I*’ influence.⁴⁴ If human consciousness turns out to be a self-delusional fiction, it is ample that machines can engage in the same fiction. But if human consciousness is more, then machines need that too. Since I tend to be a philosophical materialist, I am cautiously optimistic that machines *will* attain this ability—whatever it is in humans. And since that is what I mean by AGI, my analysis proceeds on that assumption.⁴⁵

So, what about AGI robo-defense counsel and robo-prosecutors? First, we must consider their current, human role.

II. The Defense and Prosecution Roles

What is the role of an American criminal defense lawyer? Of a prosecutor? These definitional questions are complex and have not been wholly resolved by centuries of debate among ethicists.⁴⁶ They certainly will not be resolved here. But since we require some answer in order to ask whether there is anything intrinsically important about a human in each role, we must at the very least enumerate some popular conceptions and attempt to distill their essence.

43. See generally Joshua P. Davis, *Artificial Wisdom? A Potential Limit on AI in Law (and Elsewhere)*, 72 OKLA. L. REV. 51 (2019). Davis does a tremendous job of weaving together much of the key philosophical literature in the area, from Descartes to Searle to Parfit.

44. See Brennan-Marquez & Henderson, *supra* note 5, at 149–52.

45. Similarly, it would of course alter my analysis if “legal reasoning necessarily involves the types of normative judgments that are impossible for AI.” W. Bradley Wendel, *The Promise and Limitations of Artificial Intelligence in the Practice of Law*, 72 OKLA. L. REV. 21, 26 (2019). Although I am much more skeptical of claims to attorney ‘exceptionalism’—and to human ‘exceptionalism’—than Wendel, his paper, too, is necessary reading. My object here is to ask whether we ought to retain human prosecutors or defense counsel *even if* machines are capable of such reasoning.

46. See, e.g., Fred C. Zacharias, *Fitting Lying to the Court into the Central Moral Tradition of Lawyering*, 58 CASE W. RES. L. REV. 491, 492–94 (2008) (articulating “three camps” of the “professional responsibility world”).

A. Criminal Defense

To many, the best single definition of criminal defense remains the famous words of Henry Lord Brougham. In 1820, Brougham threatened to cast England into chaos—perhaps civil war—if necessary to defend his client, Queen Caroline of Brunswick, in what amounted to divorce (and therefore adultery) proceedings.⁴⁷

[A]n advocate, by the sacred duty which he owes his client, knows, in the discharge of that office, but one person in the world, THAT CLIENT AND NONE OTHER. To save that client by all expedient means—to protect that client at all hazards and costs to all others, and among others to himself—is the highest and most unquestioned of his duties; and he must not regard the alarm, the suffering, the torment, the destruction, which he may bring upon any other. Nay, separating even the duties of a patriot from those of an advocate, and casting them, if need be, to the wind, he must go on reckless of the consequences, if his fate it should unhappily be, to involve his country in confusion for his client's protection!⁴⁸

Thanks in no small part to Lord Brougham's genuine threat, the charges against the Queen were dropped.⁴⁹

This is the elegance of criminal defense: when the State comes in all its might against a single person, it is easy to appreciate being a friend to the friendless. A comforter to the comfortless. An advocate for the oppressed. In the words of the Supreme Court, “a defense lawyer”—including one appointed by the State—“best serves the public, not by acting on behalf of the State or in concert with it, but rather by advancing the undivided interest of his client.”⁵⁰

47. See Monroe H. Freedman, *Henry Lord Brougham and Zeal*, 34 HOFSTRA L. REV. 1319, 1320–21 (2006); Terry Jenkins, *The Queen Caroline Affair, 1820*, HISTORY OF PARLIAMENT, <https://www.historyofparliamentonline.org/periods/hanoverians/queen-caroline-affair-1820> (last visited May 5, 2019).

48. HENRY LORD BROUGHAM, THE LIFE AND TIMES OF HENRY LORD BROUGHAM, WRITTEN BY HIMSELF, VOL. II, at 311 n.* (1871) (as quoted by Freedman, *supra* note 47, at 1322); see also GIDEON'S PROMISE SUMMER INSTITUTE TRAINING MANUAL 8–9 (n.d.) (on file with author) (making the same claim).

49. See Freedman, *supra* note 47, at 1321.

50. *Polk County v. Dodson*, 454 U.S. 312, 318–19 (1981) (internal quotation marks omitted). Thus, concluded Justice White, a defense lawyer will attempt to “destroy” a prosecution witness regardless of whether she thinks that witness truthful. *United States v. Wade*, 388 U.S. 218, 258 (1967) (White, J., dissenting in part and concurring in part).

Within the bounds of the law, then,⁵¹ a criminal defense lawyer owes a firm and unyielding duty of loyalty to her client, along with duties of investigation, confidentiality, communication and consultation, learning, consideration, and zealous advocacy.⁵² In key decisions at least, the defendant is the principal, and the defense attorney the agent.⁵³ The responsibilities of criminal defense counsel are, in short, considerable, but are also reasonably well articulable. Competently working to the boundaries of the law for only one person's welfare is an understandable, albeit daunting, proposition.

B. Prosecution

The definitional quandary becomes much more pronounced with the American criminal prosecution, because we give the prosecutor enormous discretion and only the most nebulous criterion: to *do justice*.⁵⁴ For Robert

51. As Professor Freedman has stressed, nobody—or at least nobody who has thought it through—denies this limitation. See Freedman, *supra* note 47, at 1323–24; see also Marvin E. Frankel, *The Search for Truth: An Umpireal View*, 123 U. PA. L. REV. 1031, 1037 (1975) (“The business of the advocate, simply stated, is to win if possible without violating the law.”); CRIMINAL JUSTICE STANDARDS FOR THE DEFENSE FUNCTION § 4-1.2(c) (AM. BAR ASS’N 4th ed. 2015) (“Defense counsel should know and abide by the standards of professional conduct as expressed in applicable law and ethical codes and opinions in the applicable jurisdiction.”); *id.* § 4-1.2(d) (“Defense counsel should act zealously within the bounds of the law and standards on behalf of their clients, but have no duty to, and may not, execute any directive of the client which violates the law or such standards.”).

52. See *Strickland v. Washington*, 466 U.S. 668, 688 (1984); CRIMINAL JUSTICE STANDARDS FOR THE DEFENSE FUNCTION §§ 4-1.3, 4-3.9, 4-4.1, 4-5.1. In the words of two Justices of the Utah Supreme Court, “Defense counsel’s [consultation] obligation is to explain the evidence against the defendant, the nature of all defenses that might be provable, all the various options the defendant has in pleading guilty or not guilty and going to trial, and the possible or likely consequences of those options.” *State v. Holland*, 876 P.2d 357, 362 (Utah 1994).

53. See *McCoy v. Louisiana*, 138 S. Ct. 1500, 1508 (2018) (“The Sixth Amendment, in granting to the accused personally the right to make his defense, speaks of the ‘assistance’ of counsel, and an assistant, however expert, is still an assistant.”) (citations omitted). Several key decisions *must* be made by the defendant herself. See CRIMINAL JUSTICE STANDARDS FOR THE DEFENSE FUNCTION § 4-5.2.

54. See *Brady v. Maryland*, 373 U.S. 83, 87 (1963) (“An inscription on the walls of the Department of Justice states the proposition candidly for the federal domain: ‘The United States wins its point whenever justice is done its citizens in the courts.’”); *Berger v. United States*, 295 U.S. 78, 88 (1935) (“The United States Attorney is the representative not of an ordinary party to a controversy, but of a sovereignty whose obligation to govern impartially is as compelling as its obligation to govern at all; and whose interest, therefore, in a criminal prosecution is not that it shall win a case, but that justice shall be done.”); *Hurd v. People*, 25 Mich. 405, 416 (1872), *superseded on other grounds by* *People v. Koonce*, 648 N.W.2d 153

H. Jackson—United States Solicitor General and then Attorney General, Supreme Court Justice and then Chief Prosecutor at Nuremberg—“The qualities of a good prosecutor are as elusive and as impossible to define as those which mark a gentleman.”⁵⁵ The concept of ‘gentleman’ is as amorphous as it is gendered anachronism, yet most would agree with Jackson that “[t]he prosecutor has more control over life, liberty, and reputation than any other person in America. His discretion is tremendous.”⁵⁶ Entirely unlike the defense attorney, who merely responds to the prosecution—even if in a proactive sense—Jackson recognized that the prosecutor

must pick his cases, because no prosecutor can even investigate all of the cases in which he receives complaints. . . . We know that no local police force can strictly enforce the traffic laws, or it would arrest half the driving population on any given morning. What every prosecutor is practically required to do is to select

(Mich. 2002) (“The prosecuting officer[’s] . . . object[,] like that of the court, should be simply justice”); ABA MODEL RULES OF PROF’L CONDUCT R. 3.8 cmt. 1 (2003) (“A prosecutor has the responsibility of a minister of justice and not simply that of an advocate.”); ABA MODEL CODE OF PROF’L RESPONSIBILITY EC 7-13 (1980) (“The responsibility of a public prosecutor differs from that of the usual advocate; his duty is to seek justice”); CRIMINAL JUSTICE STANDARDS FOR THE PROSECUTION FUNCTION § 3-1.2(a) (AM. BAR ASS’N 4th ed. 2015) (“The prosecutor is an administrator of justice . . .” who “should exercise sound discretion”); *id.* § 3-1.2(b) (“The primary duty of the prosecutor is to seek justice”); *id.* § 3-1.2(f) (“The prosecutor is not merely a case-processor but also a problem-solver responsible for considering broad goals of the criminal justice system.”); *id.* § 3-4.3(a) (“A prosecutor should seek or file criminal charges only if . . . the decision to charge is in the interests of justice.”). *See generally* Bruce A. Green, *Why Should Prosecutors “Seek Justice”?*, 26 FORDHAM URB. L.J. 607 (1999). A simple Westlaw search indicates that hundreds of courts have stated a prosecutorial duty to “seek justice,” which is—according to the National District Attorneys Association—a prosecutor’s “Primary Responsibility.” NAT’L PROSECUTION STANDARDS § 1-1.1 (NAT’L DISTRICT ATTORNEYS ASS’N 3d ed. 2009), <https://ndaa.org/wp-content/uploads/NDAA-NPS-3rd-Ed.-w-Revised-Commentary.pdf>. One commentator (favorably) compares this broad, uncertain directive to the Jewish one to, “in all [of] your ways acknowledge [God].” Samuel J. Levine, *Taking Prosecutorial Ethics Seriously: A Consideration of the Prosecutor’s Ethical Obligation to ‘Seek Justice’ in a Comparative Analytical Framework*, 41 HOUSTON L. REV. 1337, 1340 (2004).

55. Robert H. Jackson, *The Federal Prosecutor*, 24 J. AM. JUD. SOC’Y 18, 20 (1940) (address at Conference of United States Attorneys, Washington D.C., April 1, 1940).

56. *Id.* at 18; *see also* GEORGE SHARSWOOD, AN ESSAY ON PROFESSIONAL ETHICS 94 (5th ed. 1884) (“The office of the Attorney-General is a public trust, which involves in the discharge of it, the exertion of an almost boundless discretion, by an officer who stands as impartial as a judge.”).

the cases for prosecution and to select those in which the offense is the most flagrant, the public harm the greatest, and the proof the most certain. . . . With the law books filled with a great assortment of crimes, a prosecutor stands a fair chance of finding at least a technical violation of some act on the part of almost anyone.⁵⁷

When we consider that Jackson was speaking in 1940, and that Congress creates some five hundred crimes each decade, the scope of prosecutorial discretion really begins to take shape.⁵⁸ There of course remains slight limitation on the discretion to prosecute—a prosecutor must believe she has probable cause⁵⁹ and cannot decide based upon personal animus, protected classification, or exercise of constitutional right⁶⁰—but review for such discrimination is extremely deferential, and there is essentially no effective limitation nor review of the decision *not* to prosecute (a declination).⁶¹ So,

57. Jackson, *supra* note 55, at 19.

58. See John S. Baker, Jr., *Revisiting the Explosive Growth of Federal Crimes*, LEGAL MEMORANDUM (Heritage Found., Washington, D.C.) June 16, 2008, http://s3.amazonaws.com/thf_media/2008/pdf/lm26.pdf. In the words of Erik Luna, “[I]t is not altogether hyperbolic to say that *everyone is a criminal* (or at least a potential scofflaw).” Erik Luna, *Prosecutorial Decriminalization*, 102 J. CRIM. L. & CRIMINOLOGY 785, 794 (2012).

59. See *Bordenkircher v. Hayes*, 434 U.S. 357, 364 (1978) (“So long as the prosecutor has probable cause to believe that the accused committed an offense defined by statute, the decision whether or not to prosecute, and what charge to file or bring before a grand jury, generally rests entirely in his discretion.”); CRIMINAL JUSTICE STANDARDS FOR THE PROSECUTION FUNCTION § 3-4.3(a) (“A prosecutor should seek or file criminal charges only if the prosecutor reasonably believes that the charges are supported by probable cause . . .”). As an aspirational matter, the ABA believes a prosecutor should move forward only with admissible evidence sufficient to prove guilt beyond a reasonable doubt and a personal belief in that guilt. See *id.* §§ 3-1.1(c), 3-4.3(a), 3-4.3(d).

60. See *Wayte v. United States*, 470 U.S. 598, 608 (1985) (“[T]he decision to prosecute may not be ‘deliberately based upon an unjustifiable standard such as race, religion, or other arbitrary classification,’ including the exercise of protected statutory and constitutional rights.”) (citations omitted); CRIMINAL JUSTICE STANDARDS FOR THE PROSECUTION FUNCTION § 3-1.6 (“The prosecutor should not manifest or exercise, by words or conduct, bias or prejudice based upon race, sex, religion, national origin, disability, age, sexual orientation, gender identity, or socioeconomic status. A prosecutor should not use other improper considerations, such as partisan or political or personal considerations, in exercising prosecutorial discretion.”).

61. See *Wayte*, 470 U.S. at 607 (“[T]he decision to prosecute is particularly ill-suited to judicial review.”); see also CRIMINAL JUSTICE STANDARDS FOR THE PROSECUTION FUNCTION § 3-1.2(b) (“The prosecutor serves the public interest . . . both by pursuing appropriate criminal charges . . . and by exercising discretion to not pursue criminal charges . . .”); *id.* §

for Jackson, it is a prosecutor's responsibility to "protect the spirit as well as the letter of our civil liberties. . . . [T]he citizen's safety lies in the prosecutor who tempers zeal with human kindness, who seeks truth and not victims, who serves the law and not factional purposes, and who approaches his task with humility."⁶²

While the prosecutor must therefore be every bit as competent as the defense attorney, we replace a singular zeal with a much more nebulous moral humility.⁶³ She must decide who to prosecute, and consequently who among the believed-guilty to instead ignore. She must decide who to offer pretrial diversion, who instead to offer an otherwise generous deal, and who instead will go to public trial and on what charges and evidence. *Enormous discretion*. And the grounds for its exercise are as broad as 'justice' itself.⁶⁴

III. Robot Prosecution and Defense?

American criminal defense—especially for indigent persons, but hardly better for the genuinely middle-class—is seriously flawed.⁶⁵ Even if a given

3-4.4(a) ("[T]he prosecutor is not obliged to file or maintain all criminal charges which the evidence might support."). Cf. Bruce A. Green & Samuel J. Levine, *Disciplinary Regulation of Prosecutors as a Remedy for Abuses of Prosecutorial Discretion: A Descriptive and Normative Analysis*, 14 OHIO ST. J. CRIM. L. 143 (2016) (arguing that professional discipline could do more to regulate prosecutorial discretion).

62. Jackson, *supra* note 55, at 19-20.

63. A prosecutor might additionally have statutory obligations to victims, such as those enacted in so-called 'Marsy's laws.' See MARSY'S LAW, <https://marsyslaw.us/> (last visited Dec. 31, 2018); see also Jeanna Hruska, 'Victims' Rights' Proposals like Marsy's Law Undermine Due Process, ACLU (May 3, 2018, 10:00 AM), <https://www.aclu.org/blog/criminal-law-reform/victims-rights-proposals-marsys-law-undermine-due-process>.

64. See CRIMINAL JUSTICE STANDARDS FOR THE PROSECUTION FUNCTION § 3-4.4(a) (indicating sixteen permissible, non-exclusive grounds a prosecutor could consider); *id.* § 3-4.4(b) (indicating a few impermissible grounds); see also David Alan Sklansky, *The Nature and Function of Prosecutorial Power*, 106 J. CRIM. L. & CRIMINOLOGY 473, 477 (2017) ("We want [prosecutors] to be zealous advocates and impartial reviewers of the facts, crime fighters and instruments of mercy, law enforcement leaders and officers of the court, loyal public servants and independent professionals, champions of community values and defenders of the rule of law."); see also Jeffrey Bellin, *Theories of Prosecution*, 108 CALIF. L. REV. (forthcoming) (critiquing this 'do justice' model and offering a characteristically thoughtful alternative, albeit one still open to many an interpretation).

65. In the words of Richard Posner,

An extensive literature criticizes as inadequate the current level at which the defense of indigent criminal defendants in the United States is funded, noting the low quality of much of this representation. I can confirm from my own experience as a judge that indigent defendants are generally rather poorly represented.

defense lawyer is capable of great work (or at least of ‘passing’ work), she is too often so overwhelmed by an unreasonable workload and/or by impossible situations as to be functionally barely competent, or even incompetent.⁶⁶ Yet for reasons promoting the finality of judgments,⁶⁷ and because it is so difficult to ever know counterfactuals,⁶⁸ we correct only a fraction of the errors that occur. Even worse, many criminal defendants face what are, practically, critical stages of their prosecution—and life—without *any* attorney to represent them, because the Supreme Court has never held bail hearings are themselves a Sixth Amendment critical stage to which the right of appointed counsel applies.⁶⁹ (They are, says the Court, a *trigger* of

RICHARD A. POSNER, *THE PROBLEMATICS OF MORAL AND LEGAL THEORY* 163–64 (1999) (internal footnotes omitted). Posner provocatively continues,

But if we are to be hardheaded we must recognize that this may not be entirely a bad thing. The lawyers who represent indigent criminal defendants seem to be good enough to reduce the probability of convicting an innocent person to a very low level. If they were much better, either many guilty people would be acquitted or society would have to devote much greater resources to the prosecution of criminal cases. A bare-bones system for the defense of indigent criminal defendants may be optimal.

Id. at 164. *Yikes!* Posner concedes, however, that “[t]hese are difficult issues” and that he “may . . . be unduly complacent about the unlikelihood of an innocent person’s being convicted.” *Id.*

66. *See, e.g.*, Rapping, *supra* note 21, at 515–18 (describing the impossible dilemma of adequately representing criminal defendants in their first appearance); *id.* at 540–43 (describing overwhelming caseloads); *see also* BARTON & BIBAS, *supra* note 13, at 4–7, 17–30 (describing, among other substantial problems, overworked, under-skilled, and systemically underfunded defense attorneys); Richard A. Opper, Jr. & Jugal K. Patel, *One Lawyer, One Day, 194 Felony Cases, and No Time*, N.Y. TIMES (Jan. 31, 2019), <https://www.nytimes.com/interactive/2019/01/31/us/public-defender-case-loads.html> (chronicling, beautifully, the situation for one public defender).

67. *See* Strickland v. Washington, 466 U.S. 668, 693–94 (1984) (articulating a deficiency standard that “reflects the profound importance of finality in criminal proceedings”); *see also* Lee v. United States, 137 S. Ct. 1958, 1967 (2017) (noting that “the strong societal interest in finality has ‘special force with respect to convictions based on guilty pleas’” (quoting United States v. Timreck, 441 U.S. 780, 784 (1979))).

68. *See* Lafler v. Cooper, 566 U.S. 156, 170–72 (2012) (permitting, where ineffective assistance of counsel caused a defendant to go to trial, remedies including “the term of imprisonment the government offered in the plea, the sentence . . . received at trial, or something in between”). Dissenting, Justice Scalia decried a remedy of “whatever the state trial court in its discretion prescribes, down to and including no remedy at all.” *Id.* at 176 (Scalia, J., dissenting). Such a bizarre remedy makes sense—if it can ever make sense—only because it is impossible to know what would have been.

69. *See* Rothgery v. Gillespie County, 554 U.S. 191, 213 (2008).

that right going forward.)⁷⁰ Add to this mix (1) the transaction costs of trying to *find* competent counsel if one has some money to pay (look to the ‘yellow pages’?!), and (2) that a ‘mere’ arrest can ruin a life (let alone a subsequent prosecution, even one leading to acquittal), and things are not at all good.

In short, our criminal justice system is heavy on the ‘criminal’ and light on the ‘justice,’ and it is hard not to get at least a bit excited about the potential of an army of AGI criminal defense lawyers who could bring human-level—or even superhuman—competence to every minute (and even every microsecond) of every representation. And because, as developed above, a criminal defense lawyer represents *solely* the interests of her client, there seems no reason in democratic theory to demand a human being in this role.⁷¹ Indeed, to the extent that at least some humans in criminal defense suffer an agony of decision—how can I defend *her?*—an AGI robot might do better. (Or, if that agony ‘comes with the territory’ of intelligence, the AGI robot might do the same.)

Of course, human prejudice might forestall such gains. An ultimately human judge—whether a singular judge considering a guilty plea, a singular judge in a bench trial, or a collective jury—might be prejudiced against such robots, and therefore against defendants represented by such robots. In that case, we might give defendants the *informed choice* of whether to proceed by defense robot; but until the prejudice could be overcome, it might be reason enough to retain human defense lawyers, albeit lawyers benefited mightily by robot assistance. Hopefully, any such prejudice would be short-lived.

When it comes to robot prosecution, the picture clouds considerably. Although we talk about it less, prosecutors also can of course be overworked,⁷² and my sense is that their competence (globally speaking) tends to be far too low given their unique, powerful role. This is where AGI prosecutors could help. But unlike for criminal defense, it is in the very nature of the prosecutorial role not merely to discern—what are the facts and the law?—and to advocate—how should we feel about them?—but to

70. *Id.*

71. *Cf.* Brennan-Marquez & Henderson, *supra* note 5, at 156–63 (arriving at a different conclusion for the criminal jury).

72. *See generally* Peter A. Joy & Kevin C. McMunigal, *Overloaded Prosecutors*, 33 CRIM. JUST. 31 (2018); Adam M. Gershowitz & Laura R. Killinger, *The State (Never) Rests: How Excessive Prosecutorial Caseloads Harm Criminal Defendants*, 105 NW. U. L. REV. 261, 266–74 (2011).

judge.⁷³ In our world of draconian over-criminalization in both scope and severity, we expect the prosecutor to decline many winnable prosecutions, and if she did not, we would not only further swamp our already inadequate adjudicatory systems, but we would needlessly destroy even more lives.⁷⁴ A prosecutor, then, may not be the executioner, but she is the preliminary judge and jury. Assuming Kiel Brennan-Marquez and I are right that democratic theory requires role-reversible judgments,⁷⁵ it is not immediately apparent that these initial, prosecutorial judgments should be exempt from that requirement. True, prosecutorial judgments are always followed by later role-reversible ones—a judge or jury—but it seems the protection ought to be against the very prosecution, not merely against an unfavorable outcome therein.⁷⁶

Therefore, so long as prosecutors are making declination decisions—and essentially unreviewable declination decisions at that—there is intrinsic reason to keep a human in the role. But this is not to say, of course, that the intrinsic benefits of a human prosecutor necessarily outweigh the instrumental benefits of a machine one. It might mean, however, that the ideal is a combination of the two, meaning every charging decision must be considered by both a human prosecutor and a machine. If so, should any prosecution require a ‘yes’ from *both* (a logical *and*)? This would preserve the human ability to decline and permit the machine to function as an early check against misguided prosecutions, but it would also potentially—depending upon programming or particular machine intelligence—give a machine the ability to decline, a check against undesirable prosecutions.

In the alternative, should any prosecution require only a human ‘yes’ (a form of logical *or*)? If so, should the human prosecutor have to make a written, publicly-available justification for proceeding where the machine

73. For some excellent insight into this prosecutorial judgment, see generally Máximo Langer & David Alan Sklansky, *Epilogue: Prosecutors and Democracy—Themes and Counterthemes* in PROSECUTORS AND DEMOCRACY: A CROSS-NATIONAL STUDY (Máximo Langer & David Alan Sklansky eds., 2017); Sklansky, *supra* note 64; David Alan Sklansky, *The Progressive Prosecutor’s Handbook*, 50 U.C. DAVIS L. REV. ONLINE 25 (2017).

74. See generally Luna, *supra* note 58.

75. See generally Brennan-Marquez & Henderson, *supra* note 5.

76. This might be analogized to the constitutional tort doctrine of qualified immunity. While I, like many, think the Supreme Court has qualified immunity dramatically wrong as a substantive standard—shielding all but the “plainly incompetent”—it is sensible to protect some persons not only from ultimate liability but further from the very trial determination thereof. See *District of Columbia v. Wesby*, 138 S. Ct. 577, 589–90 (2018) (explaining the Court’s qualified immunity standard). Indeed, at least some such preference seems right ‘across the board’ for criminal prosecutions.

counsels against? Should that justification be made available to the ultimate decision-maker (judge or jury)? And what about the opposite situation, in which the machine recommends prosecution, but the human declines? Should this, too, require a written, publicly-available justification, in order that we can better understand—and hopefully make more fair—the declination decision?

All of these considerations are worthy of significant thought, which I will leave to future work. For now, the key insight is this: while there does *not* seem to be inherent reason to prefer human defense counsel, there *does* seem inherent reason to retain human prosecutors, albeit reason that might be overwhelmed by instrumental machine benefits. Additionally, the lens of potentially impending AGI might shine new light on a very old problem: we ought to consider whether it would be possible to more precisely define the prosecutorial role, what would be the implications thereof, and whether we can at the very least make it more transparent and accountable.

Conclusion

When we put aside speciesism and appreciate the massive injustices in our systems of criminal justice, we can't help being excited about the positive changes artificial general intelligence might permit. Yes, some attorneys—maybe even many or most attorneys—might have to find different jobs, realistically meaning that fewer will go into these lines of work. This will be disruptive. But just like AGI should bring about a world of fewer human bankers, doctors, and dentists, if these changes bring more accurate and fair criminal justice, and if they are not otherwise intrinsically harmful, they are to be eagerly anticipated. My preliminary claim is that such is the case for criminal defense attorneys, and—even more preliminarily—that the intrinsic loss in adopting robo-prosecutors might be worth the very significant instrumental gains. Assuming progress in artificial intelligence continues, then, we ought to think more on these topics in order to render more likely the beneficial integration of its results.

And even before we achieve AGI—or, even if we never achieve AGI—lesser computer intelligences might significantly aid our inadequate systems of criminal justice. We currently know next to nothing about prosecutorial declinations, and we expect next to nothing of prosecutors in terms of explaining them, apart from the relatively rare cases of significant public and political interest. And despite decades of consciousness regarding inadequate provision of criminal defense counsel, solutions continue to elude us. Yes, experience teaches that it would be foolish to expect too much. But it also teaches that it would be morally opaque not to try.