Confronting AI's Ethical Mirror Test

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by Leo E. Strine, Jr.[*]

I. Introduction

It's an honor to speak again at this important conference. One year later, I am again heartened to be among so many good people doing the hard work of governing AI companies and who understand how important it is to do so ethically. And I am grateful for your willingness to engage in good faith discussions of how we can assure that AI makes human lives better and more fulfilling – without causing widespread harm to humanity or the planet. As someone raised Catholic, it's uplifting that, in the spirit of the late Holy Father Pope Francis, our new Pope Leo — what a great name! — and the Church's leadership continue to use their moral authority to make us confront the ethical implications of AI's development and deployment. I hope and pray that their efforts will encourage more sensitivity and self-awareness as we unleash technology that, if unwisely developed or improvidently deployed, could cause substantial and irreversible harm.[1]

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The author also thanks Gevin Reynolds, Evan Rork, Margaret Pfeiffer, and Robinson Strauss for their diligent work on this article. The views in this lecture are solely my own and are not the official position of any organization with which I am affiliated and should not be represented in any way as such.

[1] The late Pope Francis was especially sensitive to the potential impact of rapidly developing technology on humanity, and the need for those who create and employ it to do so ethically and

Today, it is impossible to address all the ethical issues that AI presents for corporate leaders, or to present a comprehensive framework for optimal regulation of AI that balances its promises and risk. My more modest goal is to encourage us all to use our time together, and, more important, the influence we have in our daily roles, to think on how corporate leaders can pass the ethical mirror test that

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with a commitment to improve human well-being, not endanger it or erode our values. Pope Francis, Address at the G7 Session on Artificial Intelligence in Borgo Egnazia (Puglia) (Jun. 14, 2024), https://www.vatican.va/content/francesco/en/speeches/2024/june/documents/20240614-g7-intelligenza-artificiale.html [hereinafter *G7 Address on AI*] ("At the same time, techno-scientific advances, by making it possible to exercise hitherto unprecedented control over reality, are placing in human hands a vast array of options, including some that may pose a risk to our survival and endanger our common home"); Vatican Dicastery for the Doctrine of the Faith and Dicastery for Culture and Education, ANTIQUA ET NOVA: NOTE ON THE RELATIONSHIP BETWEEN ARTIFICIAL INTELLIGENCE AND HUMAN INTELLIGENCE ¶ 43 (Jan. 28, 2025), https://www.vatican.va/roman_curia/congregations/cfaith/documents/rc_ddf_doc_20250128_antiqua-et-nova_en.html [hereinafter "Vatican Note on Relationship of AI"] ("The commitment to ensuring that AI always supports and promotes the supreme value of the dignity of every human being and the fullness of the human vocation serves as a criterion of discernment for developers, owners, operators, and regulators of AI, as well as to its users."); *see also*, Pope Francis, Encyclical Letter, LAUDATO SI': ON CARE FOR OUR COMMON HOME ¶ 18 (2015), https://www.vatican.va/content/dam/francesco/pdf/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si_en.pdf [hereinafter *Care for Our Common Home*] ("Although change is part of the working of complex systems, the speed with which human activity has developed contrasts with the naturally slow pace of biological evolution. Moreover, the goals of this rapid and constant change are not necessarily geared to the common good or to integral and sustainable human development. Change is something desirable, yet it becomes a source of anxiety when it causes harm to the world and to the quality of life of much of humanity."). And Pope Leo XIV himself took his name because of his profound concern for the well-being of working people, in particular, and humanity, in general, in the face of the large-scale economic and social change that might result from AI. Pope Leo XIV, Address of His Holiness Pope Leo XIV to the College of Cardinals (May 10, 2025), https://www.vatican.va/content/leo-xiv/en/speeches/2025/may/documents/20250510-collegio-cardinalizio.html [hereinafter Address to the College of Cardinals] ("I chose to take the name Leo XIV. There are different reasons for this, but mainly because Pope Leo XIII in his historic Encyclical *Rerum Novarum* addressed the social question in the context of the first great industrial revolution. In our own day, the Church offers to everyone the treasury of her social teaching in response to another industrial revolution and to developments in the field of artificial intelligence that pose new challenges for the defence of human dignity, justice and labour.").

AI poses for them. To accomplish that, I will focus on four essential topics that must be addressed with good faith and candor if corporate leaders are going to be able to face themselves and honestly say that they did their best while using AI to better humanity's lot.

Each involves responsibility squarely within the wheelhouse of corporate leadership and that, if obfuscated or evaded, will hazard serious harm to humanity and the planet. These issues are as follows: 1) the responsibility for the business community to acknowledge that AI poses risks to humanity and the planet that must be addressed by binding legal regulation adequate to confront those international dangers; 2) the responsibility for directors and executives to govern corporations in a manner that is respectful to the interests of workers, consumers, communities of operation, the environment, and the societies they affect; 3) the responsibility for corporate leaders to understand how their companies use AI, and how that use affects their workers, consumers, the environment, and society; and 4) the responsibility for the AI industry to avoid energy and water usage that compounds the challenges of confronting human-caused climate change; usage that deprives needy human beings of affordable and accessible energy and water for their core daily needs.

Pervading these issues is this ethical reality — you cannot pass the mirror test if you lie to yourself or others or pretend that what you can plainly see does not exist.

Let's turn to these issues now.

II.   Corporate Power Without Accountability Has Never Worked

Human history does not provide a basis to be sanguine that industries that develop and commercialize new technologies will, if left unregulated by legal measures designed to protect society, conduct themselves in a socially responsible manner. Carbon-based energy, tobacco, leaded gasoline, PFAS, and opioids, among other innovative technologies, remind us of the dangers of assuming that self-regulation of AI by corporations and corporate leaders with powerful incentives to reap profits while externalizing costs will protect humanity.[2] No evolution in human nature or market dynamics has occurred in which the

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[2] In recent work and last year's keynote address, I examined the energy industry's knowledge of the harmful effects of carbon and methane emissions on the climate, and that companies understood the dangerous nature of PFAS and other novel technologies, and did not make that knowledge public. Leo E. Strine, Jr., *Ignorance is Strength: Climate Change, Corporate Governance, Politics, and the English Language*, 5 J. LAW AND POL. ECON. 26 (2025) (discussing evidence that corporations knew about the climate impact of carbon emissions); *see also* Leo E. Strine, Jr. *Using Experience Smartly to Ensure a Better Future: How the Hard-Earned Lessons of History Should Shape The External and Internal Governance of Corporate Use of Artificial Intelligence*, 50 J. CORP. LAW 101, 102-08 (forthcoming 2025) (discussing history of other innovative products that caused serious harm before adequate regulation existed to prevent misuse).

temptations of overreaching were less dangerous.[3] If anything, the power of

mobilized capital is greater than ever, transcends national borders, and generates

huge incentives to be first to the market, even if what is brought to the market may

threaten substantial harm.[4]

Just a year on from our initial conference on AI and corporate governance,

the regulatory environment around AI could not be more different. Last year, the

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[3] Pope Francis, *Care for Our Common Home*, *supra* note 1, at 77 ("Yet it must also be recognized that nuclear energy, biotechnology, information technology, knowledge of our DNA, and many other abilities which we have acquired, have given us tremendous power. More precisely, they have given those with the knowledge, and especially the economic resources to use them, an impressive dominance over the whole of humanity and the entire world. Never has humanity had such power over itself, yet nothing ensures that it will be used wisely, particularly when we consider how it is currently being used."); Pope Francis, *G7 Address on AI*, *supra* note 1 ("Our ability to fashion tools, in a quantity and complexity that is unparalleled among living things, speaks of a *techno-human condition*: human beings have always maintained a relationship with the environment mediated by the tools they gradually produced.... The use of our tools, however, is not always directed solely to the good.... Due to its radical freedom, humanity has not infrequently corrupted the purposes of its being, turning into an enemy of itself and of the planet. The same fate may befall technological tools.").

[4] The Church has recognized the need for effective international cooperation to create a regulatory framework protecting humanity and the planet from unsafe and unethical uses of AI. Pope Francis, *Message of His Holiness Pope Francis for the LVII World Day of Peace: Artificial Intelligence and Peace* (Jan. 1, 2024), https://www.vatican.va/content/francesco/en/messages/peace/documents/20231208-messaggio-57giornatamondiale-pace2024.html [hereinafter *World Day of Peace Message*] ("The global scale of artificial intelligence makes it clear that, alongside the responsibility of sovereign states to regulate its use internally, international organizations can play a decisive role in reaching multilateral agreements and coordinating their application and enforcement. In this regard, I urge the global community of nations to work together in order to adopt a binding international treaty that regulates the development and use of artificial intelligence in its many forms. The goal of regulation, naturally, should not only be the prevention of harmful practices but also the encouragement of best practices, by stimulating new and creative approaches and encouraging individual or group initiatives.").

EU was in the process of enacting the EU Artificial Intelligence Act.[5] And

American policymakers in both parties, with industry support, seemed supportive

of the adoption of sensible AI regulation to help protect the public, promote fair

competition along ethical lines, and to produce a better benefit-cost ratio for AI in

terms of its net contribution to human welfare.[6] At that time, the possibility of an

eventual American, EU, and larger OECD convergence around a fundamentally

consistent regulatory framework for AI thus seemed conceivable.[7]

      But, in the U.S., things are now far different, and the Executive Branch and

the Congress have seemingly abandoned any interest in regulating AI to protect

children, the elderly, consumers, groups that have historically faced unfair

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[5] Artificial Intelligence Act, EUR. PARL. DOC. P9_TA(2024) 0138 (Apr. 19, 2024) (Corrigendum), https://www.europarl.europa.eu/doceo/document/TA-9-2024-0138-FNL-COR01_EN.pdf (EU legislation on AI).

[6] *See* Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence, Exec. Order No. 14,110, 88 Fed. Reg. 75191 (Oct. 30, 2023) (U.S. executive order). And key industry players told U.S. legislators that they recognized and supported the need for sensible regulation. Darrell M. West, *Senate Hearing Highlights AI Harms and Need for Tougher Regulation*, BROOKINGS (May 17, 2023), https://www.brookings.edu/articles/senate-hearing-highlights-ai-harms-and-need-for-tougher-regulation/ (noting calls from major industry players in a 2023 Senate hearing for government regulation of AI to ensure protection of the public from its misuse); Richard Waters, *Can AI Be Regulated?*, FIN. TIMES (May 19, 2023), https://www.ft.com/content/8446842c-537a-4fc4-9e02-667d719526ae; Tom Wheeler, *The Three Challenges of AI Regulation*, BROOKINGS (Jun. 15, 2023), https://www.brookings.edu/articles/the-three-challenges-of-ai-regulation/ (citing to industry support for national regulation of AI). The American public also showed overwhelming bipartisan support for AI regulation. Megan Poinski, *AI Regulation Has Strong Bipartisan Approval*, FORBES (Apr. 18, 2024), https://www.forbes.com/sites/cio/2024/04/18/ai-regulation-has-strong-bipartisan-approval/.

[7] For the OECD, see Recommendation of the Council on Artificial Intelligence, OECD Legal/0449 (as amended Mar. 5, 2025), https://legalinstruments.oecd.org/en/instruments/%20OECD-LEGAL-0449.

discrimination, and other broader societal interests that might be harmed if AI is deployed without appropriate care and safeguards. In fact, the federal government is in the process of going further, proposing action to bar state and local governments from enacting or enforcing their own AI protections for the public good.[8] Rather, U.S. government policy around AI is now on an explicit war footing, with the goal of achieving U.S. supremacy in the AI field, especially in comparison to China.

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[8] The current administration and a majority of congressional Republicans support a 10 year moratorium on state and local regulation of AI. This extends to existing state regulations designed to protect against AI-generated explicit material, fraudulent deep-fakes, and algorithmic rent discrimination. A version of this policy has passed the U.S. House of Representatives as part of the "One Big Beautiful Bill Act" and is under consideration in the U.S. Senate. Anthony Adragna & Meredith Lee Hill, *Johnson Defends Megabill's 10-Year Freeze On State AI Laws,* POLITICO (Jun. 4, 2025), https://www.politico.com/live-updates/2025/06/04/congress/johnson-defends-megabills-10-year-freeze-on-state-ai-laws-00387031. Despite some notable internal opposition from Republican legislators, strict rules disfavoring the provision's inclusion, and the inherent volatility of the reconciliation process, the AI moratorium may well become the law of the land. Jacob Fulton, *AI Regulation Moratorium Dropped in Senate Budget Package*, ROLL CALL (Jun. 5, 2025), https://rollcall.com/2025/06/05/ai-regulation-moratorium-dropped-in-senate-budget-package/ (noting opposition certain Republican senators, as well as potential challenges under congressional rules of procedure.); Jacob Fulton, *Revamped Senate AI Provision Faces Quick Opposition*, ROLL CALL (Jun. 7, 2025), https://rollcall.com/2025/06/06/revamped-senate-ai-provision-faces-quick-opposition/ (reflecting an addition to the moratorium tying it to federal broadband infrastructure funds, avoiding scrutiny under conceptual rules of procedure) The moratorium has drawn criticism and united 40 Democratic and Republican state and territory attorneys general together in expressing opposition. Letter from Nat'l Ass'n of Att'ys Gen. (NAAG) to Congressional Leadership Regarding Proposed AI Preemption (May 16, 2025), https://www.doj.nh.gov/sites/g/files/ehbemt721/files/inline-documents/sonh/letter-to-congress-re-proposed-ai-preemption-_final.pdf (detailing how "states have considered and passed legislation to address a wide range of harms associated with AI and automated decision-making" and arguing against pre-emption of state authority to regulate AI in the public interest).

This abandonment of the regulatory playing field, of course, puts pressure on other economic markets — such as the EU — to reduce their own proposed regulation, so as not to put its own technology companies, and its own ability to attract jobs, at a competitive disadvantage as AI emerges as a leading focus for business applications. And the AI industry writ large is using the moment to push for a hands-off approach, in which the industry would neither be inhibited by up-front regulation as a condition to putting products into commercial deployment nor be subject to liability if those products result in harm to others.

Count me in as skeptical in the belief that this approach is responsible and adequate to protect humanity from suffering substantially more harm than it should from the deployment of a technology that transcends geographic borders in its impact. Power without accountability works only for the few with the power. It works poorly and unethically for the many.

And the lack of regulatory boundaries corrodes business conduct. Business leaders who want to do the right thing face competition from those willing to risk harm to others. Their resolve to take the high ground inevitably erodes when their stockholders demand that they keep up with industry competitors lacking the same scruples. Rather than industry ethical standards rising, they descend to the level

with the least social responsibility consistent with generating high profits. Sensible

regulation and the boundaries it erects bring out the better angels of our nature.[9]

The AI industry's self-professed commitment to benefiting society requires

it to acknowledge the legitimacy of sensible, binding, legal regulations protecting

the public from harmful employment of AI and providing for appropriate

recompense when failures in responsibility injure people.[10] No other-regarding

reason has emerged that makes the need for sensible regulation of AI less

necessary than it was when we last met in this Eternal City. The momentary

change in the direction of the political wind tempts industry leaders to consider

reversing course themselves and avoiding responsible regulation. But if reversals

of this kind occur, they will only underscore the need for regulation by law, not

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[9] There is understandable concern among industry supporters and participants about the possibility for patchwork regulation in the form of state-level legislation. *See*, *e.g.*, Letter from Chamber of Progress to Nat'l Sci. Found., Re: Request for Information on the Development of an Artificial Intelligence (AI) Action Plan (Mar. 12, 2025), https://progresschamber.org/wp-content/uploads/2025/03/FOR-SHARING_-Chamber-Request-for-Information-on-the-Development-of-an-Artificial-Intelligence-AI-Action-Plan.pdf (Chamber of Progress is a technology industry trade group). But that concern comes with less grace when it is not accompanied by support for a strong national regulatory framework that can knit with other leading international markets. That is, if opposition to state-level regulation in the U.S. is combined with opposition to national regulation, the reality is that the opposition is not about inconsistencies and inefficiency in regulation, it is about opposition to regulation itself. *See* Jon Reed, *How a Proposed Moratorium on State AI Rules Could Affect You*, CNET (June 5, 2025), https://www.cnet.com/tech/services-and-software/how-a-proposed-moratorium-on-state-ai-rules-could-affect-you/ (noting that some industry members recognize the tension in preempting state regulation in the absence of federal regulation).

[10] Pope Francis, *G7 Address on AI*, *supra* note 1 ("It is up to everyone to make good use of [AI] but the onus is on politics to create the conditions for such good use to be possible and fruitful.").

self-regulation by those with a self-interest in making profits for themselves without adequate protections for others.

III. The Utility of Requiring Corporate Leaders to Consider the Best Interests of All Stakeholders and Society, Not Just Stockholders, and Making Them More Accountable for Doing So

If sensible regulation is less likely, it will become even more important for us to consider the ethical implications of AI for corporate governance. To this point, we should embrace a form of corporate governance that imposes upon corporate leaders a "shall" duty toward not just stockholders, but also the corporation's employees, consumers, communities of operation, the environment, and the societies whose operations they affect.[11] In the U.S. and many nations, this

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[11] The Church has long taught the moral imperative for those seeking to make profits to do so with respect toward others, and especially their workers. Pope Leo XIII, Encyclical Letter, RERUM NOVARUM; ON CAPITAL AND LABOR ¶ 42 (1891), https://www.vatican.va/content/leo-xiii/en/encyclicals/documents/hf_l-xiii_enc_15051891_rerum-novarum.html [hereinafter ON CAPITAL AND LABOR] ("If we turn not to things external and material, the first thing of all to secure is to save unfortunate working people from the cruelty of men of greed, who use human beings as mere instruments for money-making."); *id.* ¶ 20 (". . .[W]ealthy owners and all masters of labor should be mindful of this - that to exercise pressure upon the indigent and the destitute for the sake of gain, and to gather one's profit out of the need of another, is condemned by all laws, human and divine. To defraud any one of wages that are his due is a great crime which cries to the avenging anger of Heaven."); *see also*, Pope Leo XIV, *Address to the College of Cardinals*, *supra* note 1; Pope Leo XIV, Address of his Holiness Pope Leo XIV to Members of the "Centesimus Annus Pro Pontifice" Foundation (May 17, 2025), https://www.vatican.va/content/leo-xiv/en/speeches/2025/may/documents/20250517-centesimus-annus-pro-pontifice.html [hereinafter *Address to Centesimus Annus Pro Pontifce Foundation*] (citing to Popes Leo XIII and Francis and noting that "the Church's social doctrine is called to provide insights that facilitate dialogue between science and conscience" on issues like "climate

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form of governance is associated with the so-called "B Corp" or benefit

corporation model. In the EU, many nations embrace this model already.[12]

In a promising development, many leading AI companies are using this

public benefit model as the framework for their profit seeking efforts, thus

combining a commitment to deliver profits for their investors with an equally

important commitment to treat stakeholders and society with fairness and respect.[13]

But to make this model as effective as possible, we must acknowledge the

reality that stockholders have most of the power over corporate elections and by

extension, the board of directors itself. For this reason, measures like co-

determination that give employees the chance to elect a portion of the board are

useful, or, at the very least, requiring that the board have a workforce committee

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change" and "disruptive technological innovations," and how they affect issues like "growing inequalities" and "job insecurity.")

[12] In the EU alone, there are 2,125 B Lab certified corporations. B LAB EUROPE, https://bcorporation.eu/ (last visited May 6, 2025). And as a matter of formal corporate law, several EU nations have forms of for-profit corporations similar to the Delaware Public Benefit Corporation, DEL. CODE ANN. tit. 8, § 361 (2023), which is the leading form of formal entity in the U.S. that requires a mandatory duty toward stakeholders. For example, both France and Italy have specific entity forms requiring such a duty. Code de commerce [C. com] [Commercial Code] art. L210-10 (Fr.); L. n. 208/2015 (It.) (*Legge di Stabilità* 2016). More broadly, the corporate laws of most EU nations generally provide that directors should manage their companies for the benefit of not just stockholders, but all the companies' stakeholders. Leo E. Strine, Jr., *The Soviet Constitution Problem in Comparative Corporate Law: Testing the Proposition That European Corporate Law Is More Stockholder Focused Than U.S. Corporate Law*, 89 S. CAL. L. REV. 1239, 1247 (2016) (compiling statutory citations to EU corporate laws embracing a duty to stakeholders).

[13] Yazhou Sun & Seth Fiegerman, *OpenAI to Create a Public Benefit Corporation. What Does That Mean?*, BLOOMBERG (May 8, 2025), https://www.bloomberg.com/news/articles/2025-05-08/openai-why-nonprofit-wants-to-create-a-public-benefit-corporation-or-pbc (citing to the fact that major AI laboratories are using this model and that one of the most important players in AI was converting its for-profit entity into a public benefit corporation).

charged with accountability for fair pay and providing workers with a safe,

collegial, and supportive workplace, give more genuine life to the model.

Likewise, shaping a committee structure at the board level that is well-tailored to

monitoring how the corporation makes money — and how the corporation's

operations affect its consumers in tangible ways, affect the communities where the

corporation's facilities are located, and affect the environment — is also critical if

the model is to work.[14] To protect the best interests of stakeholders and society,

corporate leaders have to know how the corporation affects those interests.[15]

Corporate leaders also cannot protect others without information. Well-

tailored committee structures and board policies can only be effective if an

information reporting system tracks how safely the corporation's products and

services are working, how environmentally responsible the corporation's

operations are, and how well the corporation's workers (including its contracted

workforce) are being treated.[16]

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[14] For my more extended thoughts on how American corporations would better take into account the legitimate interests of workers, *see, e.g.*, Leo E. Strine, Jr., Aneil Kovvali & Oluwatomi O. Williams, *Lifting Labor's Voice: A Principled Path Toward Greater Worker Voice and Power Within American Corporate* Governance, 106 MINN. L. REV. 1325 (2022).

[15] In last year's keynote and the article it turned into, specific recommendations were made for how internal corporate governance might enhance the benefits of AI to society and minimize its risks. Those recommendations remain relevant. Leo E. Strine, Jr., *Using Experience Smartly to Ensure a Better Future: How the Hard-Earned Lessons of History Should Shape The External and Internal Governance of Corporate Use of Artificial Intelligence*, 50:4 J. CORP. L. 101,108-112 (forthcoming 2025).

[16] AI could itself be a tool toward this end if used properly. For an incisive article exploring this possibility, see David Larcker, *et al.*, *The Artificially Intelligent Boardroom* (Rock Ctr. for Corp.

National securities laws and other reporting regimes that require large, socially important corporations to disclose information about consumer, environmental, and worker impact encourage boards to give more authentic consideration to stakeholders and societal interests. When corporate leaders must face public scrutiny for their conduct, they are more likely to pass the mirror test of social responsibility. For this form of accountability to be most effective, however, it must apply to all comparable companies, whether they have publicly traded securities or not. From the standpoint of society's interest in the responsible treatment of workers, consumers, and the environment, it is irrelevant whether one company has listed stock and another does not. What matters is the level of impact. Thus, erasing irrational boundaries around the stakeholder reporting of similarly large-situated public and private companies is a worthy goal of anyone seeking more ethical corporate conduct.

This is true in AI, as in other areas. The main worries about AI have little to do with the stockholders of AI companies or of companies seeking to employ AI in their operations. Instead, they are about AI's implications for workers, both in terms of the quality and quantity of their employment opportunities.[17] The

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Gov. at Stan. Univ., Working Paper No. CL110, Mar. 18, 2025), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5182306.

[17] This has been a profound concern of the Church. Pope Francis, *World Day of Peace* Message, *supra* note 4 ("Nor can we fail to consider, in this context, the impact of new technologies on the workplace. Jobs that were once the sole domain of human labour are rapidly being taken over by industrial applications of artificial intelligence. Here too, there is the substantial risk of

implications for vulnerable consumers, subject to deepfakes and fraud. The

implications for groups that have historically faced invidious discrimination if AI

replicates and even deepens that discrimination.[18] The implications for the

environment if AI's excessive energy and water usage continues to grow. The

implications for humanity if AI increases access to weapons of mass destruction.

Encouraging AI companies, and companies using AI, to become certified B

corporations would help provide more consistent and industry-comparable

information about how AI affects society.[19] The development of certification and

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disproportionate benefit for the few at the price of the impoverishment of many. Respect for the
dignity of labourers and the importance of employment for the economic well-being of
individuals, families, and societies, for job security and just wages, ought to be a high priority for
the international community as these forms of technology penetrate more deeply into our
workplaces.").

[18] *Supra* note 14, at *10-11 (discussing this serious problem). The Catholic Church has warned
against this danger. Pope Francis, *G7 Address on AI*, *supra* note 1 (citing to the danger that AI
programs used in criminal justice decisions will factor in ethnic origin as an example); Pope
Francis, *World Day of Peace Message*, *supra* note 4 ("…[T]he vast amount of data analyzed by
artificial intelligences is in itself no guarantee of impartiality. When algorithms extrapolate
information, they always run the risk of distortion, replicating the injustices and prejudices of the
environments where they originate. The faster and more complex they become, the more difficult
it proves to understand why they produced a particular result."). *Id*. ("In the future, the
reliability of an applicant for a mortgage, the suitability of an individual for a job, the possibility
of recidivism on the part of a convicted person, or the right to receive political asylum or social
assistance could be determined by artificial intelligence systems. The lack of different levels of
mediation that these systems introduce is particularly exposed to forms of bias and
discrimination: systemic errors can easily multiply, producing not only injustices in individual
cases but also, due to the domino effect, real forms of social inequality.")

[19] Although not without its critics, the B Lab certification process is one done by an organization
that has led in the area of corporate social responsibility and its more rigorous, updated standards
address issues relevant to the other-regarding deployment of AI, including responsibility for the
fair treatment of workers and contributions toward mitigating human-caused climate change.
For the controversy, see Simon Mundy, *New B Corp Rules Unveiled After Critics Allege
Greenwashing*, FIN. TIMES (Apr. 9, 2025), https://www.ft.com/content/8667fd7d-3e3f-49ed-
89a2-d0f11cb5a4d5; Elizabeth Bennett, *As Greenwashing Soars, Some People Are Questioning
B Corp Certification*, BBC (Feb. 6, 2024), https://www.bbc.com/worklife/article/20240202-has-

disclosure standards along the key dimensions where AI affects stakeholders and

society and demands by investors — including those who represent bondholders,

not just stock — for corporate certification would increase corporate accountability

and thus the likelihood that corporations take their obligations not to harm others

more seriously.[20] Importantly, the expectation that AI companies in all regions of

the planet, whether having listed shares or not, adhere to these expectations will

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b-corp-certification-turned-into-corporate-greenwashing. For the new B Lab guidelines, see B LAB, EXPLORE B LAB'S NEW STANDARDS (Apr. 2025), https://www.bcorporation.net/en-us/standards/performance-requirements (requiring corporations to report and be certified on dimensions important to worker well-being, climate impact and operate as part of a sustainable circular economy).

[20] Several organizations, including the International Organization for Standardization (ISO), the International Electrotechnical Commission (IEC), and the Institute of Electrical and Electronics Engineers (IEEE), are trying to develop, with varying degrees of success and at varying speeds, coherent and implementable standards for the ethical use of AI. *E.g.*, Wael William Diab & Mike Mullane, *How the ISO and IEC are developing international standards for the responsible adoption of AI*, UNESCO (Feb. 28, 2025), https://www.unesco.org/en/articles/how-iso-and-iec-are-developing-international-standards-responsible-adoption-ai. *See also*, ISO, ARTIFICIAL INTELLIGENCE (last accessed Apr. 30, 2025), https://www.iso.org/sectors/it-technologies/ai; IEEE SA, IEEE CERTIFAIED, https://standards.ieee.org/products-programs/icap/ieee-certifaied/ (last accessed Apr. 30, 2025). In fact, the ISO and IEC standards are embedded in the EU Artificial Intelligence Act. The national-level Standards Organizations are required to defer to ISO and IEC guidance under the World Trade Organization's Technical Barriers to Trade Agreement. For sources explaining the complicated nature of this interaction, see EU ARTIFICIAL INTELLIGENCE ACT, STANDARD SETTING, https://artificialintelligenceact.eu/standard-setting/ (last accessed Apr. 30, 2025). *See also*, WORLD TRADE ORG., AGREEMENT ON TECHNICAL BARRIERS TO TRADE (1995), https://www.wto.org/english/docs_e/legal_e/tbt_e.html; Mark McFadden et al., *Harmonising Artificial Intelligence: The Role of Standards in the EU AI Regulation*, OXFORD INFO. LABS 10, 11 (Dec. 2021), https://oxcaigg.oii.ox.ac.uk/wp-content/uploads/sites/11/2021/12/Harmonising-AI-OXIL.pdf. Along with these standards bodies, major accounting firms are developing their own models to provide third-party assurances for corporations as to the safe operation of AI products they use and market. Ellesheva Kissin, *Big Four Firms Race to Develop Audits for AI Products,* FIN TIMES (Jun. 3, 2025), https://www.ft.com/content/5e4e2e51-3b69-48c7-a109-c3b667295d7f.

help create a more responsible framework for competition and more accountability to humanity for corporations that deploy AI for profit.

IV.   Ignorance is Not Ethical Strength, Ignorance is Unethical

Ethics requires us to understand the implications of our own actions for the best interests of others.[21] AI's potential for dangerous misuse is so obvious that this basic truth is even more important.[22]

Accelerated use, not just development, of technologies is no ethical safe harbor from this duty of understanding. Unleashing a creation without understanding its nature, or accepting responsibility for its misuse, is ethical blasphemy, as it involves confusing yourself with God, but a God who has not entered into any caring covenant with humanity.

Corporate leaders must bear responsibility for the impact of their companies' conduct. Before corporate leaders can act ethically toward others, they must first

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[21] "[A]n ethical decision is one that takes into account not only an action's outcomes but also the values at stake and the duties that derive from those values." Pope Francis, *G7 Address on AI*, *supra* note 1; St. John XXIII, Encyclical Letter, *Pacem in Terris (Peace on Earth)*, ¶ 30. ("Once this is admitted, it follows that in human society one man's natural right gives rise to a corresponding duty in other men; the duty, that is, of recognizing and respecting that right. Every basic human right draws its authoritative force from the natural law, which confers it and attaches to it its respective duty. Hence, to claim one's rights and ignore one's duties, or only half fulfill them, is like building a house with one hand and tearing it down with the other.")
[22] Pope Francis, *G7 Address on AI*, *supra* note 1 ("Nor should it be forgotten that algorithms designed to solve highly complex problems are so sophisticated that it is difficult for programmers themselves to understand exactly how they arrive at their results. This tendency towards sophistication is likely to accelerate considerably. . . ").

understand their company's conduct — how it behaves, how it works, and who and what it affects. AI no doubt involves complex technology. But that means it is more, not less important, for corporate leaders — and I include in that category independent directors — to ask basic questions like these:

If my company is commercializing an AI tool that can be used by ordinary people:

- Will our AI search engine generate results that distort the truth? For example, if asked whether the measles vaccine prevents more harm than it risks, and the engine suggests that benefit-to-cost-ratio is poor, would you be willing to be responsible for the resulting harm?

- Can our AI tool generate false pornographic images of real people?

- Can our AI tool help someone create a lethal weapon? Or a poison?

- If someone is suicidal, will our AI tool provide feedback that deepens the user's depression and helps him figure out how to take his own life?

- If someone is seeking to write a song, novel, or article, does our AI tool provide them with unattributed and uncompensated access to the copyrighted work of others and thus deprive the sources of fair royalties and society with plagiarized works?

- Is our AI tool accessible to minors and might it subject them to possible sexual or emotional abuse and harm?

- Is our tool making it more likely that vulnerable people, like the elderly or the mentally challenged, will fall victim to deception and fraud?

If you lead a company that is using AI in its operations, questions like these might be pertinent:

- Are we using AI to screen applicants for employment based on algorithms that embed historical discrimination against black people, women, or other groups?

- Are we using AI to screen applicants for loans in the same concerning way?

- Are we using AI, instead of a thorough review including physician judgment, to determine whether to provide coverage for medical procedures and drugs important to our insureds' health? Do we understand the criteria that our software physician is applying to make those treatment determinations?

- Are we failing to support our employees with the training necessary to ensure that the AI tools they are using are not generating biased or erroneous results?

- Are we using AI to undermine the quality of our employees' jobs? Are we making their work less fulfilling and interesting? Are we failing to teach them the new skills needed to preserve and improve their career opportunities in an AI-rich workplace?

- Are we using AI tools to provide customer service and increasing delays, frustration, and error rates for our customers?

- Are we leading our customers to believe they are dealing with a human being when they are in fact interacting with AI?

- Are we using AI to invade the privacy of our employees without their knowledge?

- Are we making decisions based on the input of AI without being able to reasonably articulate why the decision makes sense?

For each company and each industry space, there will be the need to tailor the material questions but the basic point underlying why questions of this kind must be asked and answered accurately and in good faith is the basic point:

businesses cannot use AI ethically if they do not understand how they are using AI

and how others can use the AI they are selling. Without this understanding, the

effective prevention of harm is impossible.[23]

Ignorance is not ethical strength in an enlightened society; it is instead a

foundational breach of the duty to avoid harming others. Ignorance should be no

defense for any corporation or corporate leader creating harm. To pass the ethical

mirror test, one must accept the human responsibility to use AI only in ways that

one understands and that are reasonable and safe for those it stands to affect.[24]

But this acceptance has to go further, and that is the subject of the final topic

I address today.

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[23] Jovana Davidovic, *On the Purpose of Meaningful Human Control of AI*, FRONTIERS IN BIG DATA (Jan. 9, 2023), https://www.frontiersin.org/journals/big-data/articles/10.3389/fdata.2022.1017677/full; Sarah Sterz, *et al.*, *On the Quest for Effectiveness in Human Oversight: Interdisciplinary Perspectives*, *in* FACCT '24: PROCEEDINGS OF THE 2024 ACM CONFERENCE ON FAIRNESS, ACCOUNTABILITY, AND TRANSPARENCY 2495, 2503 (2024), https://doi.org/10.1145/3630106.3659051. The scary reality is that some believe that the technological capacities of AI are so unbounded that forms of AI could emerge where the AI develops, for want of a better word, a mind of its own, resists, undermines, and escapes human oversight, and acts as it wishes, in a way that could create massive harm. For an article that explains the rational basis for such fears, see Roman V. Yampolskiy, *On monitorability of AI*, 5 AI & ETHICS 689 (2025). If this is so, then the case for strong after-the-fact accountability to the harmed by the creators of uncontrollable AI is compelling, and arguments that the creator could not control its creation, or did not understand its creation, should be deemed an admission of liability.

[24] Pope Francis, *G7 Address on AI*, *supra* note 1 ("Faced with the marvels of machines, which seem to know how to choose independently, we should be very clear that decision-making, even when we are confronted with its sometimes dramatic and urgent aspects, must always be left to the human person. We would condemn humanity to a future without hope if we took away people's ability to make decisions about themselves and their lives, by dooming them to depend on the choices of machines. We need to ensure and safeguard a space for proper human control over the choices made by artificial intelligence programs: human dignity itself depends on it.")

V. AI Cannot Be Ethical If It Harms The Planet, Other Species, Humanity, and Especially The Poor

Without self-awareness and reflection, ethical conduct is impossible. The

denial of truth and responsibility is not just unethical in itself, but it is often a

reliable forensic indicator of a decision to pursue an unethical course of conduct

and to conceal that reality by obfuscation and elision.[25]

Since last year's conference, the truth about human-caused climate change

has, if anything, become more undeniable.[26]

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[25] St. Augustine of Hippo, TREATISES ON VARIOUS SUBJECTS, *reprinted in* 16 THE FATHERS OF THE CHURCH 109 (Roy J. Deferrari ed., 1952) ("Whoever thinks, moreover, that there is any kind of lie which is not a sin deceives himself sadly when he considers that he, a deceiver of others, is an honest man"); Pope Leo XIV has already made clear the moral and ethical importance of truth and the necessity for human beings to be informed if they are to make principled decisions. Pope Leo XIV, Address of the Holy Father Leo XIV to Representatives of the Media (May 12, 2025), https://www.vatican.va/content/leo-xiv/en/speeches/2025/may/documents/20250512-media.html; Hannah Brockhaus, *Pope Leo XIV to Media: Thank You 'For Your Service to the Truth'*, CATHOLIC NEWS AGENCY (May 12, 2025), https://www.catholicnewsagency.com/news/264043/pope-leo-xiv-to-media-thank-you-for-your-service-to-the-truth. *Cf*. Brad Plumer & Rebecca Dzombak, *All Authors Working on Flagship U.S. Climate Report Are Dismissed*, N.Y. TIMES (Apr. 28, 2025), https://www.nytimes.com/2025/04/28/climate/national-climate-assessment-authors-dismissed.html (reporting the firing of all the scientists and researchers involved in preparing a congressionally mandated report on the impact and pace of human-caused climate change); Press Release, The White House, On Earth Day, We Finally Have a President Who Follows Science (Apr. 22, 2025), https://www.whitehouse.gov/articles/2025/04/on-earth-day-we-finally-have-a-president-who-follows-science/.

[26] A recent report from a respected source highlights this dire reality. WORLD METEOROLOGICAL ORG., WMO GLOBAL ANNUAL TO DECADAL CLIMATE UPDATE (2025-2029) (May 28, 2025), https://wmo.int/publication-series/wmo-global-annual-decadal-climate-update-2025-2029 (the WMO notes several troubling and serious developments in climate modeling predictions: there is an "80% chance that at least one of the next five years will exceed 2024 as the warmest on record," an "86% chance that at least one of next five years will be more than 1.5°C above the 1850-1900 average," a "70% chance that 5-year average warming for 2025-2029 will be more than 1.5 °C," and "Arctic warming is predicted to continue to outstrip global average."); Kenza Bryan & Steven Bernard, *Global Temperature Rise Could Spike to Near 2C For First Time in*

Even assuming a more or less steady state world in which humanity did not expand, the challenge of constraining our use of climate-warming energy sufficiently to avoid substantial environmental and thus human harm is formidable. If that harm comes to pass, it will be disproportionally suffered by the least among us, the poorest people and nations on Earth, and the major responsibility for causing that harm will be attributable to the comparatively advantaged.[27] And the

the Next Five Years, WMO Says, FIN. TIMES (May 28, 2025), https://www.ft.com/content/1bf97b4f-786a-4277-8901-df84a6971488; World Meteorological Org., *State of the Climate 2024* (Mar. 2025), https://wmo.int/publication-series/state-of-global-climate-2024 (documenting that the La Niña effect was expected to cause lower temperatures in 2024, and the fact that temperatures continued to warm, increased rational concern that human-caused climate change is accelerating); Jana Tauschinski, *Hottest January on Record Shocks Scientists*, FIN. TIMES (Feb. 5, 2025), https://www.ft.com/content/b5d18aa4-92b0-45a5-8c31-4ec2646ff700; Raymond Zhong, *Global Temperatures Shattered Records in January,* N.Y. TIMES (Feb. 5, 2025), https://www.nytimes.com/2025/02/05/climate/earth-hottest-january.html; *see also*, Press Release, World Meteorological Org., WMO Confirms 2024 as Warmest Year on Record at About 1.55°C Above Pre-Industrial Level (Jan. 10, 2025), https://wmo.int/news/media-centre/wmo-confirms-2024-warmest-year-record-about-155degc-above-pre-industrial-level; Lijing Cheng, *et al*., *Record High Temperatures in the Ocean in 2024*, ADV. ATMOS. SCI. (Jan. 10, 2025), https://link.springer.com/article/10.1007/s00376-025-4541-3; Jeff Masters, *The Planet Had 58 Billion-Dollar Weather Disasters in 2024, the Second-Highest on Record*, YALE CLIMATE CONNECTIONS (Jan. 24, 2025), https://yaleclimateconnections.org/2025/01/the-planet-had-58-billion-dollar-weather-disasters-in-2024-the-second-highest-on-record/.

[27] Pope Leo XIV has emphasized that the Church's strong moral duty to the poor will endure and strengthen and that truthful dialogue and listening, not obfuscation, is required to meet that duty. *Address to Centesimus Annus Pro Pontifce Foundation*, *supra* note 11 ("There is so little dialogue around us; shouting often replaces it, not infrequently in the form of fake news and irrational arguments proposed by a few loud voices. Deeper reflection and study are essential, as well as a commitment to encounter and listen to the poor, who are a treasure for the Church and for humanity. Their viewpoints, though often disregarded, are vital if we are to see the world through God's eyes. . . Individuals committed to the betterment of society, popular movements and the various Catholic workers' groups are an expression of those existential peripheries where hope endures and springs anew. I urge you to let the voice of the poor be heard.") In so doing, he explicitly cited to climate change as an issue that requires such consideration and linked his thoughts to those of Pope Francis. *Id*. *See also Pope* Francis, *Care for Our Common Home*, *supra* note 1, ¶ 25 ("Climate change is a global problem with grave implications: environmental, social, economic, political and for the distribution of goods. It represents one of the principal

best evidence is that we are not close to meeting the mark necessary to prevent that harm and that the likelihood of catastrophic impacts is growing. AI is compounding that challenge through its super-sized appetite for energy.

Although AI's potential to meaningfully benefit our quality of life remains, shall we say, more illusory than concrete, AI's hunger for energy consumption is all too clear and certain. In the recent past, members of the industry recognized that human-caused climate change was an existential risk to humanity and many had net-zero policies that putatively committed their companies to helping to ameliorate further harm.[28] Industry members also recognized that if AI's development and implementation would require huge amounts of new energy, then AI could be more harmful to humanity than good. That is, unless the industry itself drives a transition to sustainable sources of energy — note the self-awareness necessary to ensure a genuinely ethical course of action.

But this connection seems to have been lost or at least diluted. Changing political winds have provided a more hospitable environment for denying the

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challenges facing humanity in our day. Its worst impact will probably be felt by developing countries in coming decades."); *id.* ¶ 6 ("The natural environment is a collective good, the patrimony of all humanity and the responsibility of everyone. If we make something our own, it is only to administer it for the good of all. If we do not, we burden our consciences with the weight of having denied the existence of others. That is why the New Zealand bishops asked what the commandment 'Thou shall not kill' means when 'twenty percent of the world's population consumes resources at a rate that robs the poor nations and future generations of what they need to survive'").

factual reality of human-caused climate change and for pursuing regulatory policies that position the industry for greater profits and less responsibility to society for harming others.[29]

In public communications, many members of the industry and its supporters call for huge public investments supporting greater energy supply, and for the reduction in the intensity of permitting and other requirements that exist to protect the environment, other species, and the public, against harm.[30] Living, as I do, in a nation still scarred by strip mines and dirty energy processing facilities, abandoned by their owners once they had squeezed out all the profits, leaving to society the clean-up costs and irreparable environmental injury, it is important to recognize that although permitting can become excessive, the demonstrated harm of energy projects undertaken without environmental review should give pause to any ethical citizen.[31] That is especially so when calls for short cuts are not accompanied by promises to accept greater responsibility if projects fail to be safe.

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[29] Max Zahn, *Tech Giants Sounded the Alarm about Climate Change. Now They're Warming Up to Trump*, ABC NEWS (Jan. 17, 2025), https://abcnews.go.com/Business/tech-giants-sounded-alarm-climate-change-now-warming/story?id=117138390.

[30] Request for Information on the Development of an Artificial Intelligence (AI) Action Plan, Public Comments, 90 Fed. Reg. 9088 (Mar. 15, 2025). In its effort to promote U.S. leadership in AI the Trump Administration asked for comments on how it could help accomplish that goal. *Id.* In the responses that are publicly available, industry participants and supporters all called for more efforts to provide them with massive increases in energy for use. *Id.* None appear to have even acknowledged the negative climate impact of that huge increase.

[31] In a short speech, it's not possible to cover every issue. But it is also the case that AI and the products required to use it also pose serious life cycle issues for inputs of production. The metals, minerals, and chemicals used in chip production, which range from caustic and carcinogenic chemicals like toluene, acetone, xylene, and glycol ethers, to heavy metals like

Even more concerning is the basic failure to accept that the industry's

voracious demand for energy will make it substantially more difficult, if not

impossible, for humanity to avoid warming the climate to a level that will cause

catastrophic environmental, economic, and human harm.[32] Without

acknowledging this reality anymore, the industry is urging governments to expand

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arsenic, mercury, cadmium, and lead, and in the production of computers and phones must go somewhere when no longer being used as part of the manufacturing process or as part of an actively used product. *See*, Tyler Charboneau, *Reevaluating the Toxicity of Semiconductor Manufacturing*, ALL ABOUT CIRCUITS (Apr. 13, 2021), https://www.allaboutcircuits.com/news/reevaluating-the-toxicity-of-semiconductor-manufacturing/. An industry that generates toxic waste bears fair accountability for its safe handling and disposal. Pope Francis, *Care for Our Common Home*, *supra* note 1, ¶ 22 ("These problems are closely linked to a throwaway culture which affects the excluded just as it quickly reduces things to rubbish…. our industrial system, at the end of its cycle of production and consumption, has not developed the capacity to absorb and reuse waste and by-products. We have not yet managed to adopt a circular model of production capable of preserving resources for present and future generations, while limiting as much as possible the use of non-renewable resources, moderating their consumption, maximizing their efficient use, reusing and recycling them. A serious consideration of this issue would be one way of counteracting the throwaway culture which affects the entire planet, but it must be said that only limited progress has been made in this regard."); Care for Creation, United States Conference of Catholic Bishops, https://www.usccb.org/beliefs-and-teachings/what-we-believe/catholic-social-teaching/care-for-creation (last accessed May 9, 2025). ("We show our respect for the Creator by our stewardship of creation. Care for the earth… is a requirement of our faith. We are called to protect people and the planet, living our faith in relationship with all of God's creation. This environmental challenge has fundamental moral and ethical dimensions that cannot be ignored").
[32] Regrettably, the baseline expectation is now that the climate will warm by a least three degrees Celsius, a level that will cause massive economic harm. *E.g.*, David Gelles, *Climate Change Could Become a Global Economic Disaster*, N.Y. TIMES: CLIMATE FORWARD (Apr. 10, 2025), https://www.nytimes.com/2025/04/10/climate/climate-change-economic-effects.html (citing to a Morgan Stanley report accepting this baseline and to several underlying studies). *E.g.*, UNEP, NO MORE HOT AIR… PLEASE! (Oct. 24, 2024), https://www.unep.org/resources/emissions-gap-report-2024 (concluding that this is now a strong likelihood); *see also*, Maximilian Kotz, *et al.*, *The Economic Commitment of Climate Change*, 628 NATURE 551-57 (2024) (economic report indicating the massive economic costs of warming at this level and the fact that it far exceeds the costs that would be necessary to prevent it). The Catholic Church accepts the scientific consensus that human-caused climate change is real and poses great dangers to humanity. Pope Francis, *Care for Our Common Home*, *supra* note 1, ¶ 23 ("A very solid scientific consensus indicates that we are presently witnessing a disturbing warming of the climatic system.")

sources of additional energy at a rapid pace. Consider the fact that powering a data center capable of training new AI models will require something like five gigawatts (GW) of power. That is equivalent to the energy used by more than four million human households, or half of New York City's peak summertime electrical demand.[33] In Roman terms, that's enough energy to power the entire Lazio region twice over.[34] Responsible estimates indicate that over 4% of total U.S. energy usage in 2023 — that is, usage in the nation with the highest per capita energy usage on the planet — was attributable solely to data centers.[35] The same estimates indicate that demand from AI could raise that usage to nearly 10% of U.S. energy in five years.[36]

Think about that. Now think about that in the context of the corresponding energy arms race that many in the industry say the U.S. needs if it wishes to prevail in its contest for AI supremacy with China. To win this race, some supporters of

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[33] Zach Stein, *Gigawatt (GW)*, CARBON COLLECTIVE (Oct. 1, 2024), https://www.carboncollective.co/sustainable-investing/gigawatt-gw (estimating that just one gigawatt can power 876,000 U.S. households per year). *Systems*, NYC MAYOR'S OFFICE OF CLIMATE & ENV. JUSTICE, https://climate.cityofnewyork.us/subtopics/systems/ (last accessed Apr. 9, 2025) (noting that during the summer, electricity demand peaks at 10.4 gigawatts).

[34] TERNA, STATISTICAL DATA, CONSUMPTION, MARKET, LAZIO (2023), https://dati.terna.it/en/load/statistical-data#consumption/market (recording that Lazio consumed 20,283.31 GWh in 2023. This indicates an average load demand of just over 2.3 gigawatts.).

[35] ELECTRIC POWER RESEARCH INST., POWERING DATA CENTERS: U.S. ENERGY SYSTEM AND EMISSIONS IMPACTS OF GROWING LOADS 3 (Oct. 30, 2024), https://www.epri.com/research/products/000000003002031198.

[36] *Id.* at 3.

the industry are calling for an all-sources approach, which includes increases in

mining and thus usage of non-sustainable energy sources.[37]

Humanity's history with energy innovation is scary as to this point. The

development of new sources of energy has historically not cut demands on old

sources, but acted as a spur, for what a new incisive book aptly calls "More and

More and More."[38] By way of current example, in my own country, ground is

being broken on the most powerful natural gas power plant in the Western

Hemisphere, the new Homer City Generating Station, whose sole purpose is to

provide energy for AI data centers.[39] This growing demand by the AI industry on

the world's supply and appetite for energy has another ethical dimension: The

demand has grown and accelerated the most in the United States, China, and the

EU.[40] Comparatively privileged regions of the world are generating more climate-

harming emissions at a time when the developing world's population seeks energy

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[37] Tim McDonnell, *The US Can't Win the AI Race Without Renewables*, SEMAFOR (Apr. 29, 2025), https://www.semafor.com/article/04/29/2025/the-us-cant-win-the-ai-race-without-renewables (Noting statements from U.S. Secretary of the Interior Doug Burgum arguing that the U.S. must use carbon-emitting sources of fuel like natural gas and coal rather than sustainable forms of energy if it is to prevail in the Administration's goal of making the U.S. predominant in AI). *See also*, RFIs, *supra* note 30.

[38] JEAN-BAPOTISTE FRESSOZ, MORE AND MORE AND MORE: AN ALL-CONSUMING HISTORY OF ENERGY (2024).

[39] *GE Vernova to Supply Turbines by 2026 for Planned NatGas Power Plant in Pennsylvania*, REUTERS (Apr. 2, 2025), https://www.reuters.com/business/energy/ge-vernova-supply-turbines-by-2026-planned-natgas-power-plant-pennsylvania-2025-04-02/.

[40] INTERNATIONAL ENERGY AGENCY, ENERGY AND AI 64 (Apr. 2025), https://iea.blob.core.windows.net/assets/dd7c2387-2f60-4b60-8c5f-6563b6aa1e4c/EnergyandAI.pdf [hereinafter *Energy and AI*].

to power lifestyles that would be considered modest in Europe or the U.S.

Lifestyles approaching those of ordinary people in the developed world. And even

if the AI industry itself buys most of its energy from sustainable sources, its hugely

growing demand, in the absence of correspondingly huger increases in sustainable

energy, could force humanity to continue using sources like coal longer to meet

quotidian needs like heating homes in winter.[41] Such usage will increase the

likelihood of irreversible, catastrophic harm from climate warming. Taken

together, this phenomenon threatens to make an unequal world even more so, and

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[41] *E.g.*, BLOOMBERGNEF, NEW ENERGY OUTLOOK 2025, at 2 (2025) (suggesting that demand for data centers supporting AI will rise to consume 8.7% of total energy use by 2050, more than the total that will be used to heat and cool homes and offices, and that the increasing data centers demand will continue to drive demand for fossil fuels, that "in aggregate 64% of incremental generation to meet data center demands comes from fossil fuels," and that these centers "could help extend the life of existing coal and gas plants") (emphasis deleted); GOLDMAN SACHS, AI TO DRIVE 165% INCREASE IN DATA CENTER POWER DEMAND BY 2030 (Feb. 4, 2025), https://www.goldmansachs.com/insights/articles/ai-to-drive-165-increase-in-data-center-power-demand-by-2030; Tim McLaughlin, *Big Tech's Data Center Boom Poses New Risk to US Grid Operators*, REUTERS (Mar. 19, 2025), https://www.reuters.com/technology/big-techs-data-center-boom-poses-new-risk-us-grid-operators-2025-03-19/ (reflecting on the risks that AI-driven data center demand pose to more ordinary human users of the grid). To this issue, there is also an effort to allow companies to claim to entirely use sustainable energy, not because they in fact do so, but because they buy offsets that supposedly account for the reality that the companies are still using climate-harming forms of energy such as coal and natural gas. Kenza Bryan, Camilla Hodgson & Jana Tauschinski, *Big Tech's Bid to Rewrite the Rules on Net Zero*, FIN. TIMES (Aug. 14, 2024), https://www.ft.com/content/2d6fc319-2165-42fb-8de1-0edf1d765be3 (discussing the effort to influence how emissions are calculated and to give far greater credit for offsets that would allow companies continuing to use large amounts of energy from non-sustainable sources as having net-zero emissions). Many experts believe that these offsets do not in fact result in net-zero emissions from energy use. *E.g.*, Eric Roston & Ben Elgin, *Companies' Climate Goals in Jeopardy From Flawed Energy Credits*, BLOOMBERG (Jun. 9, 2022), https://www.bloomberg.com/news/articles/2022-06-09/flawed-renewable-energy-credits-are-derailing-climate-efforts (discussing a 2022 study analyzing the way that Renewable Energy Credits mask real reductions in corporate emissions). These criticisms are not new. Auden Schendler, *Energy-Credit Buyers Beware*, HARV. BUS. REV. MAG. (Sept. 2006), https://hbr.org/2006/09/energy-credit-buyers-beware.

will widen the gap between the affluent and the poor, which is a serious moral problem under Catholic teaching.[42]

The AI data center's appetite for electricity is apparent, but its need for water is equally avaricious. Consider the annual demands of the proposed five gigawatt campus. Data centers use between a fifth of a liter, in the best case, to an average of 1.8 liters of water for each kilowatt-hour of electricity they consume.[43] Over the course of a year, a five gigawatt campus will swallow anywhere from

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[42] *Exodus* 22:20-26 ("You shall not oppress the poor or vulnerable. God will hear their cry"); 1 *John* 3:17-18 ("How does God's love abide in anyone who has the world's good and sees one in need and refuses to help?"); Pope Francis, *Care for Our Common Home*, *supra* note 1, ¶ 95 ("The natural environment is a collective good, the patrimony of all humanity and the responsibility of everyone. If we make something our own, it is only to administer it for the good of all. If we do not, we burden our consciences with the weight of having denied the existence of others. That is why the New Zealand bishops asked what the commandment 'Thou shall not kill' means when 'twenty percent of the world's population consumes resources at a rate that robs the poor nations and future generations of what they need to survive.'"); *Id.* ¶ 94 ("The rich and the poor have equal dignity, for 'the Lord is the maker of them all.'" (Prov 22:2). "He himself made both small and great" (Wis 6:7), and "he makes his sun rise on the evil and on the good." (Mt 5:45)); Vatican Note on Relationship of AI, *supra* note 1, ¶ 54 (Furthermore, there is the risk of AI being used to promote what Pope Francis has called the "technocratic paradigm," which perceives all the world's problems as solvable through technological means alone. In this paradigm, human dignity and fraternity are often set aside in the name of efficiency, "as if reality, goodness, and truth automatically flow from technological and economic power as such." Yet, human dignity and the common good must never be violated for the sake of efficiency, for "technological developments that do not lead to an improvement in the quality of life of all humanity, but on the contrary, aggravate inequalities and conflicts, can never count as true progress." Instead, AI should be put "at the service of another type of progress, one which is healthier, more human, more social, more integral.").

[43] Christopher Tozzi, *A Guide to Data Center Water Usage Effectiveness (WUE) and Best Practices*, DATA CENTER KNOWLEDGE (Jan. 17, 2025), https://www.datacenterknowledge.com/cooling/a-guide-to-data-center-water-usage-effectiveness-wue-and-best-practices (noting that the average WUE effectiveness of a data center is 1.8 L / kWh and that the industry-leading highest efficiency data centers use .19 L / kWh).

eight billion, in the best, most efficient case, to 78 billion liters of water.[44] The

latter is 30,000 Olympic-sized swimming pools worth of water.[45] In human terms,

that is the same amount used by 568,000 water-hungry Americans.[46]

Water is an essential human need and many around the world lack adequate

access already. Adding immensely to the pressures on that critical resource

without a genuine plan for ensuring that the basic needs of human beings, and

other species, for clean aqua fresca risks making a world that is already imbalanced

against the poor even more unfair.[47]

For this conference, here is the important, inescapable reality. AI cannot be

pursued ethically unless the AI industry squarely concedes:

- that human-caused climate change is a factual reality;

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[44] With assistance from Evan Rork, the author's calculation reflecting published WUE data, *supra* note 43, 8760 gWh in a year and 1,000,000 kW in 1 gW. [$5\ \frac{GW}{1} * 8760\ \frac{Hours}{Year} * 1.8\ \frac{L}{kWh} * 1,000,000\ \frac{kW}{GW} = 78,840,000,000\ \frac{L}{Year}$].

[45] An Olympic pool holds 2,500,000 liters.

[46] EPA, *Statistics and Facts*, https://www.epa.gov/watersense/statistics-and-facts# (last accessed Apr. 10, 2025) (noting that the average American uses ~310 L of water per day, 86 gallons).

[47] Pope Francis, *Care for Our Common Home*, *supra* note 1, ¶ 28. ("Fresh drinking water is an issue of primary importance, since it is indispensable for human life and for supporting terrestrial and aquatic ecosystems."); *id*. at 23-24. ("[A]ccess to safe drinkable water is a basic and universal human right, since it is essential to human survival and, as such, is a condition for the exercise of other human rights. Our world has a grave social debt towards the poor who lack access to drinking water, because they are denied the right to a life consistent with their inalienable dignity."); Leonardo Nicoletti, *et al*., *AI Is Draining Water From Areas That Need It Most*, BLOOMBERG (May 8, 2025), https://www.bloomberg.com/graphics/2025-ai-impacts-data-centers-water-data/ (documenting that in the United States data center growth is accelerating in regions already suffering from extremely high water stress, like California, Texas, and Virginia).

- that even absent AI's emergence and development, humanity was struggling and arguably failing to make the progress needed to avoid catastrophic warming scenarios;

- that the share of energy it is using threatens to increase the price of energy for human beings of more modest means who need it for essential aspects of daily life;[48]

- that the scale of water it is using threatens access to the most basic necessity for all life;

- that its demand for enormous new amounts of energy substantially compromises the ability of humanity to reduce emissions and hold off warming; and

- that, as a matter of social responsibility, it should bear the costs of using solely sustainable forms of energy for AI development and commercialization, and facilitate the faster transition by all of humanity to forms of energy that do not warm the climate so that AI does not have substantial "rebound effects" that drive much higher climate-harming use of fossil fuels.[49]

Extensive policy documents are now being issued that discuss the AI industry's desire for the development of huge new energy projects and its demand to consume more and more energy every year. When those same documents refuse to use the words "climate change" or "warming," an indispensable predicate for ethical behavior — a candid degree of self-awareness and responsibility in the face of objective truth — is missing.

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[48] *E.g.,* Tim McLaughlin, *Big Tech's Data Center Boom Poses New Risk to US Grid Operators*, REUTERS (Mar. 19, 2025), https://www.reuters.com/technology/big-techs-data-center-boom-poses-new-risk-us-grid-operators-2025-03-19/.
[49] *Energy and AI, supra* note 40, at 252.

Failing to speak the truth when to do so otherwise is misleading is no less dangerous than lying. And doing so to curry favor in the pursuit of profit may be called many things, but ethical is not among them.[50]

Unless the AI industry addresses and prevents the material harm its energy use portends for the climate forthrightly and effectively, none of the incremental benefits it promises will make up for that.[51] And given the serious concerns that AI's deployment may risk more harm than good — by increasing fraud and deep fakes, deepening societal inequities like racial discrimination, aiding those seeking to use weapons to harm others, and reducing the quality and quantity of jobs for human beings — rather than greater good in the form of greater efficiency, less discrimination, and more quality jobs and overall human flourishing, elision of this reality threatens to distort society's overall evaluation of AI's benefit-to-cost ratio.

In saying this, I also admit of this supposed claim: AI will help humanity find a magic technological answer to human-caused climate change by facilitating the discovery of a way to make abundant energy without warming the climate or sucking up so much carbon that the climate is cooler than before the industrial

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[50] Pope Francis, *Care for Our Common Home*, *supra* note 1, ¶ 21. ("Many of those who possess more resources and economic or political power seem mostly to be concerned with masking the problems or concealing their symptoms, simply making efforts to reduce some of the negative impacts of climate change.").

[51] Although AI has potential to help reduce emissions by advancing techniques to reduce carbon emissions, it is also being used by the fossil fuel industry to "boost exploration and production" and thus to "increase[] emissions." *Energy and AI*, *supra* note 40, at 109.

age.[52] But absent evidence that the primary focus of the AI industry itself is preventing human-caused climate change from becoming an existential catastrophe — of which there is none — this claim is simply the familiar one of history. Allow us to cause substantial harm now — in the form of exponential increases in climate-harming energy and water use — on the promise that other people — not us — will use what we profit from to solve a problem that we have made far worse and more difficult to solve.

If that is an ethical way of proceeding, then perhaps the definition of ethics itself has evolved in an Orwellian way.

VI.   Conclusion

That so many people of good faith have come together again to look at issues like this squarely in the eye, however, gives us a basis for hope that we will not proceed in that manner, where the duty to prevent harm is not shouldered by those whose conduct is increasing its risk. Your presence here signifies the self-

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[52] Many experts agree, and I accept, that AI has the potential to help reduce energy usage and carbon emissions in key areas like ground and air transportation, and industrial buildings. *E.g.*, *Energy and AI*, *supra* note 40*,* at 143-50 (transportation), and 154-169 (building). The key therefore is to make the priority of using AI to combat and reverse human-caused climate change the first priority, and put service to humanity and planet first, not just massively increase climate-harming energy use and assume that somehow AI will overcome the substantial new harm it has created and the substantially greater challenge that new harm poses for arresting climate change before catastrophic outcomes become inevitable.

awareness and appreciation of moral responsibility critical to the ethical treatment of others.

We all have an ethical and moral duty to face the mirror test that AI poses to us. Let us all resolve to work together to pass that test and make sure that AI saves rather than harms the planet, helps human beings live more meaningful lives, makes the life of workers more fulfilling, and alleviates poverty.[53] Thank you all for coming together to try to make these worthy goals become reality.

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[53] *Jeremiah* 22:13 ("Woe to him who builds his palace by unrighteousness, his upper rooms by injustice, making his own people work for nothing, not paying them for their labor"); The Dignity of Work and the Rights of Workers, United States Conference of Catholic Bishops, https://www.usccb.org/beliefs-and-teachings/what-we-believe/catholic-social-teaching/the-dignity-of-work-and-the-rights-of-workers (last accessed May 12, 2025) ("The economy must serve people, not the other way around. Work is more than a way to make a living; it is a form of continuing participation in God's creation. If the dignity of work is to be protected, then the basic rights of workers must be respected—the right to productive work, to decent and fair wages, to the organization and joining of unions, to private property, and to economic initiative"); Pope Francis, *World Day of Peace Message*, *supra* note 4 ("The immense expansion of technology thus needs to be accompanied by an appropriate formation in responsibility for its future development. Freedom and peaceful coexistence are threatened whenever human beings yield to the temptation to selfishness, self-interest, the desire for profit and the thirst for power. We thus have a duty to broaden our gaze and to direct techno-scientific research towards the pursuit of peace and the common good, in the service of the integral development of individuals and communities.").