CONCLUSION

LESSONS FOR ARTIFICIAL INTELLIGENCE FROM HISTORICAL USES OF SOFT LAW GOVERNANCE

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ABSTRACT: Artificial Intelligence (AI) is the latest example of an emerging technology that pushes regulatory and social boundaries. Stakeholders tasked with resolving these up-and-coming issues face a variety of choices in the selection and implementation of the most appropriate solution. In an effort to contribute to the analysis of alternatives, this Article summarizes the lessons learned from the utilization of soft law in the governance of four emerging technology fields as described in this special issue: (1) Environmental Technologies; (2) Nanotechnology; (3) Information and Communication Technologies (ICT); and (4) Life Sciences. Specifically, it examines the factors that contributed to the implementation of soft law by stakeholders and highlights the characteristics that differentiate it from its counterpart, hard law. The common denominator between AI and the technologies featured herein is their ability to influence significant changes in our society. With its analysis, this Article's objective is to underscore practices that may maximize AI's positive impact in the world.

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Artificial intelligence's (AI) applications and methods have found their place in a cross-section of the economy, with more to come in the near future.[1]

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1. Angel Gurría, *Preface to* ORG. FOR ECON. CO-OPERATION & DEV., ARTIFICIAL INTELLIGENCE IN SOCIETY 3 (2019).

To manage its repercussions on individuals and organizations, society has two alternatives at its disposal. There is traditional government regulation or "hard law," which can force entities to behave in a particular manner through the monopoly power that society has assigned to public authorities. Conversely, there are soft law programs, consisting of instruments that define substantive expectations that are not directly enforceable by the government.[2] In reality, some mixture of hard and soft law approaches will eventually be used for most problems caused by AI.

Regardless of one's perspective about its relative merits, soft law is a governance tool that stakeholders in the AI ecosystem should consider. Far from a prediction or possibility, it already has a role in the governance of AI. Whether it is the preferred approach, second-best alternative, or a short-term gap filling measure until hard law is promulgated, soft law should be made as effective and trustworthy as possible. Right now, a significant proportion of soft law consists of ethical principles that are actively discussed by organizations throughout the world. These principles are incredibly important, and it is a major step forward in this technology's governance that various initiatives have demonstrated a convergence on key AI ethical principles.[3] But principles alone are insufficient. There is a growing realization that stakeholders must move beyond principles and toward processes to identify and implement specific programs—within and between entities developing or using AI that can put the ethical principles into practice.

Implementing AI processes, and not just principles, is a more challenging and complex undertaking, and one that is breaking new ground. But it need not be accomplished on a blank slate. Soft law has been applied to other technologies, in many cases for decades. The four articles presented in this special issue examine case studies in the soft law governance of the environment, nanotechnology, information and communications technologies, and the life sciences. The lessons from these case studies are rich, nuanced, and informative. They show that soft law programs come in a variety of shapes, sizes, and roles. That it is neither a panacea, nor without value. Rather, the success of any soft law measure is often context specific, depending on the problem to be addressed, the entities that created it, its incentives, objectives, requirements, and the existence of indirect enforcement mechanisms such as audits, certifications, internal or external reporting and oversight, insurance requirements, and litigation.[4]

As evinced by the case studies discussed in the four papers, summarized in Table 1 below, soft law catalyzed different reactions and outcomes. In successful cases, soft law motivated organizations to change their behavior, while in

2. Gary Marchant, *"Soft Law" Governance of Artificial Intelligence*, AI PULSE 1, 1–2 (Jan. 25, 2019), https://aipulse.org/soft-law-governance-of-artificial-intelligence/?pdf=132 [https://perma.cc/HX7J-BJ4Y].

3. *See generally* Anna Jobin et al., *The Global Landscape of AI Ethics Guidelines* 1 NATURE MACH. INTEL. 389 (2019); JESSICA FJELD ET AL., PRINCIPLED ARTIFICIAL INTELLIGENCE: MAPPING CONSENSUS IN ETHICAL AND RIGHTS-BASED APPROACHES TO PRINCIPLES FOR AI (2020), http://nrs.harvard.edu/urn-3:HUL.InstRepos:42160420 [https://perma.cc/XJP3-8LPS].

4. *See generally* Cary Coglianese, *Environmental Soft Law as a Governance Strategy*, 61 JURIMETRICS J. 19 (2020).

others it did not—or had mixed outcomes. Why did this happen? This Article attempts to answer that question by organizing the key findings from the four articles in this special issue and identifying the appropriate lessons for managing AI's consequences.

Table 1: Outcomes from a Selection of Cases of this Special Issue

Success	Failure	Mixed outcomes
Internet Corporation for Assigned Names and Numbers	Children's Online Privacy Protection Rule	National Telecommunications and Information Administration – Multistakeholder discussions on mobile app transparency + drone privacy + facial recognition
Motion Picture Association of America	Internet Content Rating Association	
Federal Trade Commission– Consent decrees	Platform for Internet Content Selection	YourAdChoices
Federal Communications Commission– Power over broadcaster licensing	Platform for Privacy Preferences	United Nations Educational, Scientific and Cultural Organization declarations on genetics and bioethics
Entertainment Software Rating Board	Do Not Track System	Environmental Management Systems (ISO 14001)
National Institute of Standards and Technology– Framework for Improving Critical Infrastructure Cybersecurity	Nanotechnology voluntary data call-in by Australia, the United States, and the United Kingdom.	Sustainable Forestry Practices by the Sustainable Forestry Initiative and Forest Stewardship Council
Asilomar rDNA Guidelines		Leadership in Energy and Environmental Design
International Gene Synthesis Consortium		
International Society for Stem Cell Research Guidelines		
BASF Code of Conduct		
Environmental Defense Fund and DuPont Risk Framework		

Part I of this Article distills the factors that incentivized the implementation of soft law by stakeholders. It divides their adoption into two groups: punishment avoidance and reward-seeking behaviors. Part II underscores the key characteristics from the case studies that make soft law stand out from hard law and showcases relevant examples. Part III compiles lessons from the past

implementation of soft law in emerging technologies to guide efforts in the creation of new programs for the governance of AI.

I. FACTORS CONTRIBUTING TO SOFT LAW'S IMPLEMENTATION

Soft law can only impact society if organizations willingly adopt it. Through an analysis of the case studies, the special issue identified four trends that explain the incentives behind why soft law programs motivate firms, government, and nonprofits to voluntarily submit to its provisions. The first two factors relate to the avoidance of punishment because of a hard law "threat."[5] Section I.A on government warning systems discusses the power of regulatory authorities to pressure entities into acting in a particular way. This is followed by Section I.B on proactive actions to anticipate and preempt hard law. Here, a soft law program is created to dissuade authorities from imposing regulation, thus sidestepping the formal policy process.

The second set of factors are associated with the internal motivations of organizations. Section I.C highlights the participation of entities in soft law because they seek a reward or net benefit.[6] Thus, soft law is adopted because it serves as an incentive to obtain a desired outcome, such as a requirement to qualify for research funding, or a standard that serves as a signaling mechanism to attract a target group. Section I.D details the last factor for why organizations implement soft law: to protect an interest. Examples of this behavior include shielding an organization's reputation or its bottom line.

A. Government Warning Systems

All organizations are subject to regulation through the compliance of hard laws in their respective sectors. This special issue illustrates how soft law can act as a tool for authorities to warn their targets about the enforcement of existing laws or generate expectations of behavior based on the threat of new hard law. In both instances, entities that chose to comply with soft law programs are motivated to alter their business practices to avoid the negative consequences of government action.

In the enforcement of hard laws, government agencies have opted to warn entities about acts that potentially contravene regulations and are subject to a penalty. The Federal Communications Commission (FCC) does this with its letters of inquiry. Upon the reception of a complaint, content broadcasters are notified of an investigation related to a violation that could ultimately lead to the revocation of their license. Because this punishment would essentially bankrupt a firm, recipients tend to revise their programming based on the FCC's recommendations.

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5. *See generally* Adam Thierer, *Soft Law in U.S. ICT Sectors: Four Case Studies,* 61 JURIMETRICS J. 79, 94–95, 111 (2020).

6. *See* Coglianese, *supra* note 4, at 48–49.

An alternative to an enforcement warning is setting a baseline for acceptable behavior through soft law. There are variations on how government agencies may communicate their expectations. The toolkit of the Federal Trade Commission (FTC) contains an instrument known as a consent decree, which has been called "a new *soft* law of privacy."[7] As explained by Adam Thierer, consent decrees "are settlements that regulatory agencies broker with private actors and which impose penalties on those actors for violating rules enforced by the agency."[8] Although they represent hard law to the institution targeted by each decree, third parties can feel obliged to follow the content of those decrees as a means of avoiding government attention. This incentive also exists in agencies such as the Food and Drug Administration (FDA). The FDA issues guidance through nonbinding recommendations, such as its 2016 Postmarket Management of Cybersecurity in Medical Devices, that are nonetheless followed by regulated parties to elude government notice.[9]

Government warnings can fall short if the soft law's target is not incentivized to act. Diana Bowman's article describes programs implemented by the United Kingdom, the United States, and Australia intended to identify nano-based products in the marketplace.[10] All of these soft law programs failed for several reasons: (1) no threat of punishment; (2) government attempts to burden entities with onerous information requests: (3) confidentiality of the data was not guaranteed; and (4) lack of transparency regarding the purpose of the initiative.[11] As a result, a negligible number of organizations participated in the reporting schemes.

B. Anticipating Hard Law

Hard law is created in an unpredictable process that combines the interests of the government, the public, and the private sector—yet no one party can control its eventual outcome. Firms can endeavor to sidestep hard law by developing soft law that eases society's reservations about their products or services. The special issue details several instances where this occurred.

In the 1980s and 1990s, the video game industry successfully anticipated hard law that could have disrupted the distribution of their products. Firms that published games with violent content were confronted by consumers, namely parents, who were dissatisfied with the level of access that their children had to objectionable material.

Amid Congress considering limitations on the access to violent video games for underage consumers and First Amendment court battles on the matter,

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7. Thierer, *supra* note 5, at 101, 101–02 ("[T]he FTC used these enforcement actions both 'to hold those companies accountable for the promises they make' to the public, and also to recommend to others a set of broad-based best practices for handling data going forward.").

8. *Id.* at 101.

9. *Id.* at 112.

10. *See generally* Diana M. Bowman, *The Role of Soft Law in Governing Nanotechnologies*, 61 JURIMETRICS J. 53 (2020).

11. *See generally id.*

the industry took a stand via soft law. It created a voluntary rating system overseen by an entity called the Entertainment Software Rating Board (ESRB).[12] This program labeled games via an external party, thus informing parents of what they can expect from titles. It allowed the industry players to control the marketing of their products instead of ceding their decision-making to hard law. A significant factor in their success was the level of cooperation amongst the small group of firms that commercialized most titles.

Firms whose activities impact the natural environment felt a pressure similar to their entertainment counterparts. Many advocated the International Organization for Standardization (ISO) for standards that would convince governments about their ability to self-regulate environmental practices, rather than being at the mercy of additional environmental hard law.[13] In tandem, consumer cognition of the impact of businesses on the environment was growing, leading stakeholders to believe that it was a matter of time before legislative efforts gained momentum.[14] In response, the ISO created standards for environmental management systems (ISO 14001), an organization agnostic effort that allowed firms in any sector to implement a "plan-do-check-act model with respect to their environmental performance."[15]

C. Incentive to Obtain an In-Demand Resource

Soft law programs can be adopted to reward access to a desired good in return for taking responsible action. Within this special issue, our contributors found instances where soft law became the gateway to allocate research funding, publish in a prestigious journal, or gain consumer goodwill through reputational signaling. Interestingly, all cases involved programs used by parties that had no role, or a small role, in their creation, but repurposed them into a precondition for an in-demand resource.

The first example is the Asilomar recombinant DNA (rDNA) Guidelines, which were developed in 1974 as a "voluntary moratorium on a class of experiments involving rDNA."[16] As Yvonne Stevens remarks in her article, the guidelines had a major effect in the direction of research when the National Institutes of Health made compliance with this soft law a requirement to obtain funding.[17]

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12. Thierer, *supra* note 5, at 97.

13. *See* Coglianese, *supra* note 4, at 23–25.

14. *Id.* at 25. Coglianese observes:

> Businesses were also interested in possible alternatives to the so-called command-and-control nature of hard environmental law, and they saw environmental management systems as a possible substitution for the imposition of additional regulatory mandates. If companies could demonstrate that they could systematically and responsibly manage their own environmental affairs under the EMS rubric, perhaps the pressure for more regulation could be abated.

Id.

15. *Id.* at 26.

16. Yvonne A. Stevens, *Soft Law Governance: A Historical Perspective from Life-Science Technologies*, 61 JURIMETRICS J. 121, 122 (2020).

17. *See id.* at 125.

As a significant part of this sector's output relies on these resources, any individual or organization seeking funding to perform groundbreaking research would be forced to accept its precepts.[18]

The second example is the guidelines created by the International Society for Stem Cell Research (ISSCR), the largest professional association of stem cell researchers. This program was developed to instill ethics and transparency in the group's membership. However, its transition to becoming enforceable soft law occurred when an important set of journals (*Nature* family) declared it would only accept research that complied with its terms.[19] This was groundbreaking because a key consideration in the career advancement of these professionals is publishing in highly ranked journals. Therefore, researchers wishing to avoid this program would not remain competitive in their field.

Lastly, Cary Coglianese presents standards that provide consumers with information to discriminate between products. The Forest Stewardship Council (FSC) and the Sustainable Forestry Initiative (SFI) are multifaceted private standards certifying that wood and paper products come from sustainable forests. In essence, participating entities pay to comply with this program because they believe this recognition will meet consumer demand for environmentally conscious goods. The same principle applies to the Leadership in Energy and Environmental Design (LEED) standard. To meet the demand for the purchase or lease of buildings that consume energy efficiently, builders can submit their designs to the U.S. Green Building Council (USGBC) and receive a recognition that signals its characteristics.[20] Along with the private sector, the U.S. government has committed to this standard by requiring that all of its new facilities be LEED certified.[21]

D. Protection of Interests

Soft law can serve as a shield to safeguard stakeholder interests by demonstrating a commitment to an idea or industry best practices. Its implementation provides validation to society that an entity desires to improve its processes and products to the highest available standard—or allows an entity to protect valuable assets. The case studies from the special issue evince that putting forth the effort to adhere to these programs can provide tangible benefits.

One such benefit is minimizing the cost of insurance coverage. The National Institute of Standards and Technology (NIST) developed its cybersecurity framework in 2014 to guide sector stakeholders on managing and reducing their risks.[22] Thierer points out that since the framework's release, the insurance market realized that firms implementing this program are less likely to suffer losses compared to their counterparts. To decrease payouts, insurance companies in this sector have offered clients that apply these practices a discount on their

18. *Id.*
19. *Announcement: Human Embryo and Stem-Cell Research*, 557 NATURE 6, 6 (2018).
20. Coglianese, *supra* note 4, at 42–43.
21. *Id.* at 43.
22. Thierer, *supra* note 5, at 113.

premiums.[23] This symbiotic relationship benefits the interests of both parties by minimizing their cybersecurity risks and increasing their bottom lines.

A fundamental organizational asset is reputation. Losing it because of a defective product or harmful process could result in severe economic repercussions. Bowman discusses three instances of soft law to protect this asset.[24] First, BASF, the largest chemical company in the world, attempted to secure its standing among stakeholders by self-imposing a nanotechnology code of conduct. Its objective is to hold its leadership accountable by creating an institution-wide obligation to customers and the environment.[25] Similarly, the Environmental Defense Fund and Dupont's Nano Risk Framework was created by a recognized nonprofit and one of the most relevant firms in the market.[26] Its purpose was to spread a model, which signaled that companies adopting the Framework were leaders in the safe use of nanotechnologies.[27] Finally, several sunscreen products in Australia have implemented a non-nano label to communicate the absence of this ingredient in their products.[28] This is because of changing social norms that have diminished the public trust in nano-based materials. The application of these initiatives has the explicit intention of mitigating future risks that could derail the financial outlook of firms.

Reputation also played a role in the control of biological agents. Stevens highlights the creation of an alliance with the remit of defending the world against the harmful misuse of synthetic DNA to protect the reputation of its members.[29] The International Gene Synthesis Consortium (IGSC) has the goal of applying "a common protocol to screen both the sequences of synthetic gene orders and the customers who place them."[30] Over 80 percent of the industry has joined this alliance, and a compelling reason is to avoid the reputational risk of becoming the entity that lacks adequate safeguards to prevent endangering the planet's biosecurity.[31]

Lastly, the Motion Picture Association of America (MPAA) self-imposed a censoring system for decades that was meant to enforce its interpretation of

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23. *Id.* (citing Anne Hobson, *Aligning Cybersecurity Incentives in an Interconnected World*, R ST. POL'Y STUDY (R St., New York, N.Y.), Feb. 2017, at 1, 3, https://www.rstreet.org/wp-content/uploads/2018/04/86-1.pdf [https://perma.cc/DA68-C2EB]).

24. *See generally* Bowman, *supra* note 10.

25. *Id.* at 61 ("The body of information published by BASF since 2004 (including details of its engagement across sectors, and its findings), suggest a level of ongoing commitment to the Code that is anything but tokenistic. Based on the extensive range of activities the company is involved in, its transparency in reporting, and its willingness to be held to account based on the Code, it can be argued that the company—through its highest levels of leadership—was committed to fulfilling its obligations to employees, customers, and the environment.").

26. *Id.* at 62.

27. *Id.*

28. *Id.* at 71–73.

29. *See* Stevens, *supra* note 16, at 125–26.

30. INT'L GENE SYNTHESIS CONSORTIUM, https://genesynthesisconsortium.org/ [https://perma.cc/QD2R-N56H].

31. *See id.*

prevalent social norms.[32] It was substituted by another soft law program, because competition from foreign productions not abiding by the organization's program caught the attention of the public.[33] Additionally, judicial rulings asserted the First Amendment rights of offending films.[34] In a sense, the MPAA was forced to transition its soft law to protect its influence on the sector, even if this meant relinquishing its control over production. Notably, neither rating system would have been successful if the largest studios in the industry had not banded together to implement them.

Alongside examples where soft law and stakeholder's interests align, the historical case studies also illustrate instances where the lack of incentives, or conflicting ones, discouraged soft law implementation. In her article, Bowman reflects on initiatives such as the *Principles for the Oversight of Nanotechnologies and Nanomaterials* that were meant to shape the behavior of firms in the nano sector, but failed to motivate compliance because of their "high-level nature" and absence of "clear and actionable objectives."[35] Thierer points out a similar outcome with Internet content moderation initiatives.[36] Despite the support of dominant sector firms, the Internet Content Rating Association and the Platform for Privacy Preferences were unable to convince the increasingly large number of site developers that constantly cataloging all of their content was in their interest.[37]

Conflict in reaching a consensus between groups with differing incentives can derail efforts to create soft law. The National Telecommunications and Information Administration invited consumer and industry groups to develop guidelines for the commercial use of facial recognition technology. Unfortunately, the consumer groups decided to collectively walk out of the initiative upon realizing that their counterparts were not inclined to make pro-consumer commitments on this technology's implementation.[38] A similar situation occurred with the Do Not Track privacy system promoted by the World Wide Web Consortium.[39] Notwithstanding the support of the government (through the FTC) and privacy advocates, industry partners disagreed, making a consensus impossible to reach. Thus, the initiative failed.

II. CHARACTERISTICS OF SOFT LAW

Having described the motivating factors for the implementation of soft law, the case study authors extolled many of its characteristics while also noting limitations of soft law programs. In doing so, they noted the differences between soft and hard law, while also arguing for its value in governing emerging technologies. Sections II.A through II.F extract ideas that stakeholders should bear

32. Thierer, *supra* note 5, at 96.

33. Michael Asimow, *Divorce in the Movies: From the Hays Code to* Kramer vs. Kramer, 24 LEGAL STUD. F. 221, 233 (2000).

34. *Id.*

35. Bowman, *supra* note 10, at 61.

36. Thierer, *supra* note 5, at 99.

37. *Id.* at 107.

38. *See id.* at 103.

39. *Id.* at 107–08.

in mind when considering the advantages and disadvantages of implementing soft law.

A. Competition

Without barriers to entry that prevent organizations from creating programs, soft law is democratic in nature. In the realm of emerging technologies, any entity can develop programs to govern an issue. This includes businesses that develop or use a technology, consumers who purchase or are affected by it, nongovernmental organizations interested in its appropriate use, and policymakers drawn to govern it.

Soft law enables program developers to compete for consumers who, in turn, have access to a variety of choices. The case studies confirm such a worldview via the multiple schemes available for environment management systems, forest certifications, nanotechnology frameworks, and Internet content labeling alliances. Depending on the diversity and motivation of program developers, stakeholders can find themselves in one of two scenarios: a race to the top where rivalry catalyzes a contest for the most credible system, or a race to the bottom, where competitors undercut each other.[40]

B. Speed and Adaptability

Unburdened by the policy-making process (e.g., notice and comment procedures, judicial review, ratification by legislative bodies, or lobbying by interested parties) organizations that desire to launch a soft law program can do so in a compressed timeline.[41] This is an advantage over hard law considering that "[f]ormal rulemaking is simply too time-consuming" and, once in place, technology can outstrip its capabilities.[42] In addition, once soft law is created, organizations can periodically or reactively modify or experiment with programs if changing conditions require adaptation.[43] By the same token, entities pondering whether to implement soft law can choose to move quickly in testing and adopt it—unlike having to commit to hard law analogues whose binding nature could be discouraging.[44]

The rDNA moratorium that surfaced through the Asilomar Guidelines exemplifies the above-mentioned characteristics.[45] A group of scholars created this consensus relatively quickly following the discovery of the potential dangers from rDNA experimentation. The group designed the program with the flexibility to lift restrictions as new information that validated the technology's

40. Coglianese, *supra* note 4, at 49, 50. Coglianese's race-to-the-top argument is "made in the context of hard law in DAVID VOGEL, TRADING UP (1997)." *Id.* at 49 n.205).

41. *See generally id.*; Thierer, *supra* note 5.

42. *See* Mark D. Fenwick et al., *Regulation Tomorrow: What Happens When Technology Is Faster than the Law*? 6 AM. U. B. L. REV. 561, 572 (2017).

43. *See generally* Coglianese, *supra* note 4.

44. *See generally* ADÈLE LANGLOIS, NEGOTIATING BIOETHICS: THE GOVERNANCE OF UNESCO'S BIOETHICS PROGRAMME (2013), https://www.ncbi.nlm.nih.gov/books/NBK189523/pdf/Bookshelf_NBK189523.pdf [https://perma.cc/QCU3-TVYS].

45. Stevens, *supra* note 16, at 122.

safety was discovered.[46] Adaptability is also at the heart of the NIST Privacy Framework. The government agency released the document in versions that simulated software development (Version 1.0, 1.1, etc.) to demonstrate its iterative nature.[47]

Lastly, environmental standards embody several dimensions of adaptability. On the one hand, many institutions have established schedules to review their standards, provisions, and relevance.[48] On the other, applicants have several degrees of freedom to adjust the standards to their needs. For instance, the ISO 14001 is agnostic about what type of environmental impact an organization wishes to manage, its size, or line of business.[49] The forestry standards allow entities to develop a plan that is "appropriate to the scale and intensity of the operations."[50] Meanwhile, LEED uses a point system that addresses nine themes related to the building's design and adapts to the type of project submitted for certification.[51]

C. International in Application

Jurisdictions and borders do not represent a limitation for soft law, allowing programs to wield power and adapt to conditions locally, regionally, and at the continental or global level. This factor is likely to be important for technologies such as AI that have a strong international application. Many of the cases that this issue's contributors draw upon make clear the comparative advantage of programs unburdened by geographic fencing and those that incent the inclusion of entities with diverse needs.

At the global level, Thierer stresses the idea of "new globalization."[52] He draws on it in the discussion of the Internet Corporation for Assigned Names and Numbers' (ICANN's) role as a representative of an information and com-

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46. *Id.*

47. *See generally* Jennifer Huddleston et al., *Mitigating Privacy Risks While Enabling Emerging Technologies*, MERCATUS CTR. (Oct. 24, 2019), https://www.mercatus.org/publications/regulation/mitigating-privacy-risks-while-enabling-emerging-technologies [https://perma.cc/2TKW-UHHG] ("When faced with the rapid changes associated with technological advancement, the use of soft law can facilitate a governance approach that is able to evolve with and enable innovation better than traditional policy tools.").

48. *See generally* U.S. FOREST STEWARDSHIP COUNCIL, FSC-STD-01-001 V5-2 EN, FSC PRINCIPLES AND CRITERIA FOR FOREST STEWARDSHIP (2015); U.S. GREEN BLDG. COUNCIL, https://www.usgbc.org/ [https://perma.cc/3V7V-HEA5].

49. *ISO 14001:2015*, INT'L ORG. FOR STANDARDIZATION, https://www.iso.org/standard/60857.html [https://perma.cc/5C9U-4QKE].

50. Coglianese, *supra* note 4, at 35 (quoting U.S. FOREST STEWARDSHIP COUNCIL, FSC-US FOREST MANAGEMENT STANDARD (V1.0), at 59 (2010)).

51. Coglianese notes: "These facets are Integrative Process, Location and Transportation, Sustainable Sites, Water Efficiency, Energy and Atmosphere, Materials and Resources, Indoor Environmental Quality, Innovation, and Regional Priorities." *Id.* at 44 n.173 (citing *Leadership in Energy & Environmental Design*, LEED, http://leed.usgbc.org/leed.html ([https:// perma.cc/J8UA-B24K]).

52. Thierer, *supra* note 5, at 88 (citing RICHARD BALDWIN, THE GREAT CONVERGENCE: INFORMATION TECHNOLOGY AND THE NEW GLOBALIZATION 175 (2016)).

munications technology (ICT)-centered soft law, whose mandate affects any individual on Earth with an Internet connection.[53] Similarly, the ISSCR guidelines, environmental standards promulgated by the ISO, the IGSC, LEED standards, or declarations by the UNESCO are available to parties interested in applying them throughout the world. For example, the LEED standards have been adopted by projects "across 160 countries and territories."[54] Regionally, the SFI forestry standards were created specifically for Canada and the United States, while its counterpart, the FSC standards, have a global reach.

D. Legitimacy

Soft law's nonbinding character and the ability of any organization to create it can, understandably, sow doubt on the legitimacy of this type of governance. The case studies address this by demonstrating how organizations attempt to reassure external entities about the validity of their programs and governance structure.

An approach to validation is via a neutral third party, a staple of standard setting organizations (SSOs). Any organization interested in adopting a standard can apply it to its processes and products through two means: (1) doing so independently or (2) hiring an external firm to corroborate its correct implementation. The latter assures the rest of the world that the standard was applied accordingly.

Much like the FSC, SFI, and LEED, ISO standards auditors are accredited by the SSO, audited every couple of years, and can be barred from consulting with organizations seeking certification.[55] Entities wishing to maintain their certification must undergo a reassessment where an auditor confirms that all aspects of the standard continue to be applied. An important caveat is that the results of an audit are not disclosed to outsiders, which means that the public is unable to scrutinize an entity's level of compliance.[56]

An alternative to demonstrating a program's transparency is through its governance. As Thierer points out, there is an innate tension in the input and

53. *See id.* at 91.

54. *Leadership in Energy & Environmental Design*, *supra* note 51.

55. Coglianese, *supra* note 4, at 35 n.100) (citing *Certification Body Accreditation*, U.S. FOREST STEWARDSHIP COUNCIL, https://fsc.org/en/page/certification-body-accreditation [https://perma.cc/D2EW-3PHK]. Coglianese notes that "[c]urrently, there are about a dozen accredited certifiers for forests in the United States." *Id.* (citing *Certifying Bodies in the US*, U.S. FOREST STEWARDSHIP COUNCIL, https://us.fsc.org/en-us/certification/certifying-bodies-in-the-us [https://perma.cc/EV9U-BX92]); *see also* U.S. GREEN BLDG. COUNCIL, *supra* note 48; *ISO 14001:2015*, *supra* note 49.

56. *See* Edwin Pinero, *Introduction to EMS Auditing Concepts and ISO 14000*, OFF. FED. ENV'T EXEC., at 2, https://www.fedcenter.gov/_kd/Items/actions.cfm?action=Show&item_id=660&destination=ShowItem [https://perma.cc/W89M-ZNGZ]; Matthew Potoski & Aseem Prakash, *Covenants with Weak Swords: ISO 14001 and Facilities' Environmental Performance*, 24 J. POL'Y ANALYSIS & MGMT. 745, 748, 749 (2005).

information that can be made readily available for public analysis when designing or updating soft law.[57] He argues that in multistakeholder settings, room is needed for "frank conversation and high-quality negotiations may require a certain amount of privacy."[58] Reaching a balance entails considering the need for privacy along with allowing outsiders access to scrutinize the decisions of an organization or initiative. The transition between the government and ICANN demonstrates that such a balance is possible. For several years, government and nongovernment players participated in an "audacious experiment in global governance" by tackling one of the most complex negotiations in a credibly open and transparent manner that reached a widely supported outcome.[59]

In the world of nanotechnology, Bowman illustrates efforts to engage with the public. BASF, the largest chemical company in the world, committed in writing to opening a dialogue with society and releasing its plan of action, activities, and scientific data.[60] In the environmental world, Coglianese notes that standards-setting organizations periodically assess the state of their programs. The SFI and FSC undergo this process with the participation of experts from all sectors of society and by eliciting public commentary.[61] The organization charged with LEED also develops its guidelines in a "transparent, consensus-based process that includes several rounds of public comments and approval from USGBC members."[62]

E. A Complement to Hard Law

Soft law alone cannot solve the problems in the emerging technologies space. A symbiotic relationship with hard law is needed to either fill its gaps or steer it in novel directions.[63] Examples of both are evinced in the special issue case studies.

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57. Thierer, *supra* note 5, at 116 ("Potential tension exists between transparency and quality of outcomes in some soft law negotiations. On one hand, transparency is optimal in multistakeholder initiatives and other soft law efforts to ensure trust and legitimacy. On the other hand, frank conversation and high-quality negotiations may require a certain amount of privacy among stakeholders to hammer out workable solutions. This represents an inherent tension in all soft law systems. Striking the balance may require a limited space for private negotiating while ensuring that most proceedings and major decisions are made in an open and transparent fashion." (emphasis omitted)).

58. *Id.*

59. Lawrence E. Strickling & Jonah Force Hill, *Multi-Stakeholder Internet Governance: Successes and Opportunities*, 2 J. CYBER POL'Y 296, 296–97 (2017); *see* Richard Hill, *Internet Governance, Multi-Stakeholder Models, and the IANA Transition: Shining Example or Dark Side*? 1 J. CYBER POL'Y 176, 185 (2016).

60. *See In Dialog with Society*, BASF, https://www.basf.com/global/en/who-we-are/sustainability/we-produce-safely-and-efficiently/resources-and-ecosystems/nanotechnology/dialog/with-society.html [https://perma.cc/4GF9-BRRN] (follow hyperlinks to download individual final reports).

61. Coglianese, *supra* note 4, at 33–38.

62. *Leadership in Energy & Environmental Design*, *supra* note 51.

63. Adam Thierer, *Reflections on Brussels Summit on Future of Free Expression / Child Protection*, TECH. LIB. FRONT (June 16, 2006), https://techliberation.com/2006/06/16/reflections-on-brussels-summit-on-future-of-free-expression-child-protection [https://perma.cc/Q73Y-YV7W];

Soft law filled the gaps created by Section 230 of the Telecom Act, which protected sites from liability caused by third-party contributions.[64] The legislative branch noted that it "hoped that by granting platforms that legal immunity, the platforms could take steps to self-moderate potentially objectionable content without fear of legal repercussions."[65] Similarly, firms in the videogame sector created the ESRB to fill a social void for more information on video game content. Its rating system offers parents choices over the type of entertainment their families enjoy.

Soft law has also guided the future of hard law. The UNESCO declarations on genetics and bioethics generated a baseline that steered policymaking and nongovernment advocacy in over 219 member states.[66] Moreover, the Dupont-EDF framework has served as a reference for international organizations (OECD) and federal agencies of the United States.[67]

F. Implementation versus Effectiveness

There is a distinction between the implementation and effectiveness of soft law. Implementation refers to the adoption of a program by a target population, which is an important step in catalyzing change. Effectiveness involves altering the behavior of an entity in pursuit of a goal. The special issue identifies cases of successfully implemented soft law programs, but notes where evidence of impact in their overarching goals was limited or inconclusive. Indeed, Coglianese expresses that "[s]oft law governance may only have a modest impact on the overarching problems it seeks to solve because it is, well, soft."[68] At the same time, he observed that "[s]oft law governance may help in diffusing best practices and bolstering social norms which, if sufficiently embedded in practice, could ultimately prove more effective than hard law."[69]

In his article, Coglianese points out that the organizations behind ISO 14001, LEED, and the forestry standards may be stringent with documenting processes that comply with their parameters, but are less focused on their overall results or impact. In the case of ISO 14001, empirical studies that have at-

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Howard Fienberg, *New FTC Data Privacy Report Poses Challenges to Marketing Research*, INSIGHTS ASS'N BLOG (Mar. 26, 2012), https://www.insightsassociation.org/article/new-ftc-data-privacy-report-poses-challenges-marketing-research [https://perma.cc/K2Q7-UXXD]. *See generally* Coglianese, *supra* note 4.

64. Adam Thierer, *The Greatest of All Internet Laws Turns 15*, FORBES (May 8, 2011), http://www.forbes.com/sites/adamthierer/2011/05/08/the-greatest-of-all-internet-laws-turns-15 [https://perma.cc/PAV2-QQSH].

65. Thierer, *supra* note 5, at 89.

66. Stevens, *supra* note 16, at 128.

67. *DuPont Nanotech Project: Government Influence*, ENVTL. DEF. FUND, http://business.edf.org/projects/featured/past-projects/dupont-safer-nanotech/dupont-nanotech-project-government-influence [https://web.archive.org/web/20191109203502/http://business.edf.org/projects/featured/past-projects/dupont-safer-nanotech/dupont-nanotech-project-government-influence].

68. Coglianese, *supra* note 4, at 50 (emphasis omitted).

69. *Id.* at 49 (emphasis omitted).

tempted to untangle its environmental effects do "not [reveal] a very large improvement difference."[70] For forestry standards, studies have yet to provide "scientifically persuasive information on the efficacy of forest certification programs" or how they address the challenges faced by this sector.[71] Evaluations of LEED certifications have turned out to be "contradictory," some stating positive effects, while others asserting the opposite.[72] Furthermore, a small subset of the eligible population implements these programs: less than 2 percent of potential entities for ISO 14001,[73] "roughly 11 percent of the world's forests fall under at least one form of certification,"[74] and about 0.60 percent of all buildings in the United States were LEED-certified in 2018.[75]

In the nanotechnology space, Bowman asserts that even when the DuPont-Environmental Defense Fund guidelines have been adopted by a diverse sample of firms and multilateral organizations, "the real impact of the tool is unlikely to be realized for some time to come."[76]

III. SOFT LAW LESSONS FOR AI

Similar to the emerging technologies described within this special issue, AI has and will continue to catalyze the creation of soft law. Although there is much to learn about the eventual impact of this technology's methods and applications, stakeholders are obliged to inform themselves of the lessons learned from both the failed and successful implementation of soft law in the past. The objective of this Article was to provide such a source of information and lessons. Through this analysis, it distilled the factors that may maximize the impact of this governance tool for AI or other technologies in the near or distant future.

On the one hand, this Article codified a well-known characteristic of soft law: its voluntary nature. As a governance alternative that lacks a means of regulatory enforcement, its compliance is contingent on the alignment of incentives. Through the examination of the case studies, four factors stand out as

70. *Id.* at 31 (quoting ASEEM PRAKASH & MATTHEW POTOSKI, THE VOLUNTARY ENVIRONMENTALISTS: GREEN CLUBS, ISO 14001, AND VOLUNTARY ENVIRONMENTAL REGULATIONS 166 (2006)).

71. Errol E. Meidinger, *The New Environmental Law: Forest Certification*, 10 BUFF. ENV'T L.J. 213, 281 (2002). *See generally* LARS H. GULBRANDSEN, TRANSNATIONAL ENVIRONMENTAL GOVERNANCE: THE EMERGENCE AND EFFECTS OF THE CERTIFICATION OF FORESTS AND FISHERIES (2010).

72. Ali Amiri et al., *Are LEED-Certified Buildings Energy-Efficient in Practice?*, SUSTAINABILITY, Mar. 2, 2019, art. no. 1672, at 1, 5.

73. Coglianese, *supra* note 4, at 29.

74. *Id.* at 40 (citing Lars H. Gulbrandsen, *Public Sector Engagement with Private Governance Programmes: Interactions and Evolutionary Effects in Forest and Fisheries Certification*, *in* SMART MIXES FOR TRANSBOUNDARY ENVIRONMENTAL HARM 211, 221 (Judith van Erp et al. eds., 2019); *id.* at 45 n.190) (citing *Country Market Brief*, U.S. GREEN BUILDING COUNCIL, https://www.usgbc.org/resources/country-market-brief (last visited Dec. 30, 2020).

75. *Id.* at 45 (citing *Table B1. Preliminary Estimates Summary Table for All Buildings, 2018*, U.S. ENERGY INFO. ADMIN., https://www.eia.gov/consumption/commercial/data/2018/index.php?view=characteristic (follow "XLS icon" hyperlink).

76. Bowman, *supra* note 10, at 66.

contributors to the successful implementation of soft law. Two are directly related to government action, while the other two are associated with an organization's internal motivations.

The first group of incentives highlights how the threat of government action is a powerful catalyst. Government can take advantage of soft law as a warning system to hard law. This decade has witnessed the use of guidelines and recommendations by agencies of the U.S. government to steer the behavior of society in sectors related to AI—such as autonomous vehicles, medical algorithms, and facial recognition. Soft law may also be used to deter government from acting to create new hard law. In the past couple of years, entities have joined forces to generate principles, standards, and guidelines to demonstrate their ability to self-govern in areas where government has limited or no existing hard law rules such as privacy, transparency, and meaningful human control, among others.

The second group of factors that contribute to soft law's implementation is associated with the internal motivations of organizations. This could be in the form of an in-demand resource that is attainable through the compliance of soft law, such as signaling mechanisms that provide recognition and attract a target group. For AI, labels or certifications that denote adherence to transparency or privacy practices serve this role.

Another important motivation is the protection of interests. The objective of private sector entities is to increase shareholder value, and soft law can become a tool to shield these interests. Many organizations in the business of developing AI methods and applications have created principles of practice to protect their reputation and, by extension, their bottom line. In addition, SSOs have invested heavily in developing standards in the field of AI. One of the purposes these serve is to allow an entity that develops or uses AI to demonstrate its adherence to an industry's highest levels of practice, which can partially shield it from liability.

Beyond incentives to adopt soft law, this Article underscores the characteristics that will make soft law a valuable resource for the governance of AI. The lack of barriers to entry allows any organization to experiment with its own program and compete in a battlefield of ideas. This has led to the creation of hundreds of examples devoted to AI in a very short time, and it encompasses jurisdictions throughout the world—something virtually impossible for hard law to replicate.[77] Its creation may also serve as a complement to hard law in issues where no regulation currently exists or where gradual experimentation can lead to more effective hard law. This is not to say that soft law is a panacea. For it to be effective, however, stakeholders must actively address its legitimacy issues and realize that further research is required to determine if its implementation ultimately addresses the roots of society's concerns.

The impossibility of predicting the future makes it necessary to avoid repeating mistakes by learning from the past. The four articles in this special issue represent a rich resource on the soft law governance of technologies in times of

77. Carlos Ignacio Gutierrez et al., *Preliminary Results of a Global Database on Soft Law Mechanisms for the Governance of Artificial Intelligence*, *in* PROCEEDINGS OF THE IEEE/ITU INTERNATIONAL CONFERENCE ON ARTIFICIAL INTELLIGENCE FOR GOOD (forthcoming 2020).

uncertainty. Today, AI represents a source of this uncertainty and soft law is an alternative to reduce it. With the publication of this special issue, it is our hope that stakeholders will learn from the experiences of entities that succeeded, as well as those that failed, in their attempts to use innovative soft law approaches to manage the consequences of emerging technologies.