

# Antitrust-Compliant AI Industry Self-Regulation

*Cullen O’Keefe\**

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## SUMMARY

The touchstone of antitrust compliance is competition. To be legally permissible, any industrial restraint on trade must have sufficient countervailing procompetitive justifications. Usually, anticompetitive horizontal agreements like boycotts (including a refusal to produce certain products) are *per se* illegal.

The “learned professions,” including engineers, frequently engage in somewhat anticompetitive self-regulation through professional standards. These standards are not exempt from antitrust scrutiny. However, some Supreme Court opinions have nevertheless held that some forms of professional self-regulation that would otherwise receive *per se* condemnation could receive more preferential antitrust analysis under the “Rule of Reason.” This Rule weighs procompetitive and anticompetitive impacts to determine legality. To receive the rule-of-reason review, such professional self-regulation would need to:

1. Be promulgated by a professional body;
2. Not directly affect price or output level; and
3. Seek to correct some market failure, such as information asymmetry between professionals and their clients.

Professional ethical standards promulgated by a professional body (i.e., comparable to the American Medical Association or American Bar Association) that prohibit members from building unsafe AI could plausibly meet all of these requirements.

This paper does *not* argue that this would clearly win in court, or that such an agreement would be legal. Nor does it argue that it would survive rule-of-reason

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\* Counsel, Policy & Governance, OpenAI; Research Affiliate, Centre for the Governance of AI; Research Affiliate, Legal Priorities Project

review.<sup>†</sup> It merely says that there exists a colorable argument for analyzing such an agreement under the Rule of Reason, rather than a *per se* rule. Thus, this could be a plausible route to an antitrust-compliant horizontal agreement to not engineer AI unsafely.

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<sup>†</sup> However, it is very difficult for plaintiffs to prevail in rule-of-reason cases. According to one empirical study, “[i]n 221 of 222 [rule-of-reason] cases [that did not settle] . . . , the defendant won.” Michael A. Carrier, *The Rule of Reason: An Empirical Update for the 21st Century*, 16 GEO. MASON L. REV. 827, 830 (2009) (footnote omitted).

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## LEGAL BACKGROUND: PROFESSIONAL SELF-REGULATION AND ANTITRUST

Antitrust laws apply not only to the conduct of typical business corporations, but also to the “learned professions”:<sup>1</sup> e.g., law, medicine, and engineering.<sup>2</sup> Thus, anticompetitive practices by professionals can violate the antitrust laws.

The case that established the applicability of antitrust laws to professionals was *Goldfarb v. Virginia State Bar*.<sup>3</sup> There, plaintiffs challenged a minimum fee schedule for legal work set by the state bar association.<sup>4</sup> The Supreme Court held that this minimum fee schedule was illegal price-fixing.<sup>5</sup> The Court rejected defendants’ argument that the practice of law, as a profession, fell outside the antitrust laws.<sup>6</sup> In a famous footnote (“Footnote 17”), however, the Court opined:

The fact that a restraint operates upon a profession as distinguished from a business is, of course, relevant in determining whether that particular restraint violates the Sherman Act. It would be unrealistic to view the practice of professions as interchangeable with other business activities, and automatically to apply to the professions antitrust concepts which originated in other areas. The public service aspect, and other features of the professions, may require that a particular practice, which could properly be viewed as a violation of the Sherman Act in another context, be treated differently. We intimate no view on any other situation than the one with which we are confronted today.<sup>7</sup>

The next major Supreme Court case on-point was *National Society of Professional Engineers v. United States*.<sup>8</sup> There, the US sued over an ethical canon that prohibited engineers from engaging in “competitive bidding.”<sup>9</sup> Defendants asserted that the

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<sup>1</sup> See *Goldfarb v. Virginia State Bar*, 421 U.S. 773, 787 (1975).

<sup>2</sup> See William Blumenthal, *A Primer on the Application of Antitrust Law to the Professions in the United States*, 14 ANDREWS ANTITRUST LITIG. REP. 13, at \*1 (2007).

<sup>3</sup> 421 U.S. 773 (1975).

<sup>4</sup> See *id.* at 776–78.

<sup>5</sup> See *id.* at 781–83.

<sup>6</sup> See *id.* at 787–88.

<sup>7</sup> *Id.* at 788 n.17.

<sup>8</sup> 435 U.S. 679 (1978).

<sup>9</sup> See *id.* at 682–84.

canon served the public interest because price competition “would lead to deceptively low bids, and would thereby tempt individual engineers to do inferior work with consequent risk to public safety and health.”<sup>10</sup>

The Court held that the canon nevertheless constituted illegal price-fixing.<sup>11</sup> The Court thoroughly rejected defendants’ public welfare arguments, holding that, “[e]ven assuming occasional exceptions to the presumed [good] consequences of competition, the statutory policy precludes inquiry into the question whether competition is good or bad”:<sup>12</sup>

[R]estraint on competition . . . on the basis of the potential threat that competition poses to the public safety . . . is nothing less than a frontal assault on the basic policy of the Sherman Act. . . . Exceptions to the Sherman Act for potentially dangerous goods and services would be tantamount to a repeal of the statute.<sup>13</sup>

The Court also found Footnote 17 inapplicable to the defendants’ canon:

[T]he cautionary footnote in *Goldfarb* cannot be read as fashioning a broad exemption under the Rule of Reason for learned professions. We adhere to the view expressed in *Goldfarb* that, by their nature, professional services may differ significantly from other business services, and, accordingly, the nature of the competition in such services may vary. *Ethical norms may serve to regulate and promote this competition, and thus fall within the Rule of Reason.* But the Society’s argument in this case is a far cry from such a position. We are faced with a contention that a total ban on competitive bidding is necessary because otherwise engineers will be tempted to submit deceptively low bids. Certainly, the problem of professional deception is a proper subject of an ethical canon. But, once again, the equation of competition with deception, like the similar equation with safety hazards, is simply too

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<sup>10</sup> *Id.* at 693. Note the close analogy to arguments in favor of non-racing agreements in AI: competition in AI capabilities development would lead to suboptimal investment in safety, to the risk of public safety. *Cf.* NICK BOSTROM, SUPERINTELLIGENCE 246–54 (2014); Stuart Armstrong et al., *Racing to the Precipice: A Model of Artificial Intelligence Development 2* (Future of Humanity Inst., Technical Report No. 2013-1), <https://perma.cc/S56B-Z5UZ>.

<sup>11</sup> *See* *Prof'l Engineers*, 435 U.S. at 695.

<sup>12</sup> *Id.*; *see also id.* at 696 (“[T]he Rule of Reason does not support a defense based on the assumption that competition itself is unreasonable.”).

<sup>13</sup> *Id.* at 695. Thanks to Carrick Flynn for suggesting the inclusion of this quotation.

broad; we may assume that competition is not entirely conducive to ethical behavior, but that is not a reason, cognizable under the Sherman Act, for doing away with competition.<sup>14</sup>

Thus, the *Professional Engineers* Court left open the door to some narrow forms of professional self-regulation without establishing a clear rule therefor.

Next came *FTC v. Indiana Federation of Dentists*.<sup>15</sup> There, defendants attempted to limit insurer second-guessing of the dental necessity of patient care by agreeing not to submit x-rays to insurers that requested them.<sup>16</sup> One of the proffered defenses of this policy was that it protected the quality of patient care.<sup>17</sup> The Court rejected the availability of this defense under the rule of *Professional Engineers*.<sup>18</sup>

*Allied Tube & Conduit Corp. v. Indian Head, Inc.*<sup>19</sup> did not involve the learned professions but contained the following relevant dicta:

Agreement on a product standard is . . . implicitly an agreement not to manufacture, distribute, or purchase certain types of products. Accordingly, private standard-setting associations have traditionally been objects of antitrust scrutiny. When, however, private associations promulgate safety standards based on the merits of objective expert judgments and through procedures that prevent the standard-setting process from being biased by members with economic interests in stifling product competition, those private standards can have significant procompetitive advantages. It is this potential for procompetitive benefits

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<sup>14</sup> *Id.* at 696 (emphasis added) (footnote omitted) (citation omitted).

<sup>15</sup> 476 U.S. 447 (1986).

<sup>16</sup> *See id.* at 449–50.

<sup>17</sup> *See id.* at 462.

<sup>18</sup> *See id.* at 463–64. Einer Elhauge and Damien Geradin offer the following analysis of this point:

On principle, the [quality-of-care] justification was rejected because it involved a claim that informed consumers would make bad choices. Factually, it was rejected on the grounds that insurers represented consumer interests because insurers had to compete for consumer patronage. The latter seems more debatable because agency costs give insurers incentives to increase profits by misusing x-ray information to deny desirable claims. Perhaps the case would come out differently if the insurers did not use dentists to make the denial decisions, because then there would have been more fear the decisions were not being based on sound medical judgment.

EINER ELHAUGE & DAMIEN GERADIN, *GLOBAL ANTITRUST LAW AND ECONOMICS* 212 (3d. ed. 2018).

<sup>19</sup> 486 U.S. 492 (1988).

that has led most lower courts to apply rule-of-reason analysis to product standard-setting by private associations.<sup>20</sup>

The final relevant case is *California Dental Association v. FTC*.<sup>21</sup> There, defendants' code of ethics prohibited advertising containing certain promises of low prices.<sup>22</sup> The Court held that the prohibition should receive full rule-of-reason review<sup>23</sup> because it "fail[ed] to present a situation in which the likelihood of anticompetitive effects is comparably obvious."<sup>24</sup> The Court reasoned that the restrictions "might plausibly be thought to have a net procompetitive effect, or possibly no effect at all on competition":<sup>25</sup>

The restrictions on both . . . advertising are, at least on their face, designed to avoid false or deceptive advertising in a market characterized by striking disparities between the information available to the professional and the patient. In a market for professional services, in which advertising is relatively rare and the comparability of service packages not easily established, the difficulty for customers or potential competitors to get and verify information about the price and availability of services magnifies the dangers to competition associated with misleading advertising. What is more, the quality of professional services tends to resist either calibration or monitoring by individual patients or clients, partly because of the specialized knowledge required to evaluate the services, and partly because of the difficulty in determining whether, and the degree to which, an outcome is attributable to the quality of services (like a poor job of tooth filling) or to something else (like a very tough walnut). Patients' attachments to particular professionals, the rationality of which is difficult to assess, complicate the picture even further. *The existence of such significant challenges to informed decisionmaking by the customer for professional services immediately suggests that advertising restrictions arguably protecting patients from misleading or irrelevant advertising call for more than cursory treatment*

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<sup>20</sup> *Id.* at 500–01 (citations omitted).

<sup>21</sup> 526 U.S. 756 (1999).

<sup>22</sup> *See id.* at 760, 760 n.1.

<sup>23</sup> As opposed to "quick look analysis," which is appropriate "when the great likelihood of anticompetitive effects can easily be ascertained." *See id.* at 770.

<sup>24</sup> *See id.* at 771.

<sup>25</sup> *Id.*

as obviously comparable to classic horizontal agreements to limit output or price competition.<sup>26</sup>

Note that this applies even though the dentists were financially interested in the restraint.<sup>27</sup>

Taking the above cases together, “[t]he resulting doctrine thus seems to be that, unlike ordinary businesses, professionals can impose . . . restraints to try to regulate market failures, subject to rule-of-reason review, as long as they do not involve direct restraints on price or [level of] output . . . .”<sup>28,29</sup> Uninterested self-regulations are likely to receive more favorable treatment.<sup>30</sup>

## APPLICATION TO AI

### *Schema*

Of interest here is a hypothetical and potentially desirable horizontal agreement (“Agreement”) between AI engineers (or those working for labs aiming to produce artificial general intelligence, or “AGI”) not to produce unsafe A(G)I.<sup>31</sup>

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<sup>26</sup> *Id.* at 771–73 (emphasis added) (footnotes omitted) (citations omitted).

<sup>27</sup> See ELHAUGE & GERADIN, *supra* note 19, at 229.

<sup>28</sup> *Id.*; see also *Koefoot v. Am. Coll. of Surgeons*, 652 F. Supp. 882, 888 (N.D. Ill. 1986) (“[R]ule of reason analysis is appropriate when facially legitimate ethical canons are challenged under the Sherman Act. The Court defines facially legitimate ethical canons as being rules of professional practice which, on their face, establish professional standards of care without reference to the economic interests of the professionals.”).

<sup>29</sup> Note that “level of output” means a nonzero level. Refusing to produce something in some sense restrains output of that thing, but it does not fix prices to the benefit of the producers, which is the worry with direct output restraints. *Cf.* ELHAUGE & GERADIN, *supra* note 19, at 211.

<sup>30</sup> See *Koefoot*, 652 F. Supp. at 888.

<sup>31</sup> The exact meaning of “unsafe AI” is not worth discussing here, as it is the subject of substantial disagreement.



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*Prima Facie Application of Doctrine**Engineers are a Profession*

“Engineering is a[] . . . learned profession.”<sup>32</sup> Thus, “computer engineers” or “AI engineers” or even “AGI engineers” could theoretically avail themselves of the protections of this doctrine. The Agreement could be part of the code of ethics of a new or existing professional organization of engineers.

*An Agreement Would Not Directly Affect Price or Output Level*

The Agreement prohibits engineers from producing some defective product. It does not directly affect price or output level.

*An Agreement Corrects Market Failure*

There is a colorable argument that an Agreement would correct a market failure (namely, information asymmetry). AI engineers are much better-positioned than their clients to know whether AI they produce is safe. Thus, an Agreement would be analogous to the ethical canon at-issue in *California Dental*: it would regulate informational asymmetries in the professionals’ market.

Note that the market failure is *not* the externalized risk to the public from unsafe AI. Under *California Dental*, the procompetitive benefits of the Agreement must accrue to the *consumers*.<sup>33</sup>

If the above arguments are correct, then *California Dental* dictates that the Agreement would be subject to rule-of-reason review. The defendants would then have to show that its procompetitive effects outweigh its anticompetitive effects. The fact that the engineers arguably have no financial interest in the Agreement<sup>34</sup> militates against a finding of anticompetitive effects.<sup>35</sup>

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<sup>32</sup> *Prof'l Eng'rs*, 435 U.S. at 681. While *Professional Engineers* did not specifically involve computer engineers, computer engineers should still be able to avail themselves of the doctrine.

<sup>33</sup> *Cf. California Dental*, 526 U.S. at 773; Clark C. Havinghurst & Nancy M. P. King, *Private Credentialing of Health Care Personnel: An Antitrust Perspective: Part One*, 9 AM. J.L. & MED. 131, 170 n.124 (1983). Furthermore, fixing market failures *generally* is not a sufficient reason to engage in anticompetitive behavior. *Cf. Fashion Originators' Guild of Am. v. Fed. Trade Comm'n*, 312 U.S. 457, 467–68 (1941) (holding that dress manufacturer industry group plan to boycott retailers that bought pirated dress designs was violation of antitrust laws).

<sup>34</sup> *Cf. ELHAUGE & GERADIN, supra* note 19, at 212.

<sup>35</sup> *See id.* (citing *Allied Tube*, 486 U.S. at 501); *see also id.* at 211.

*Analogy to Medical Ethical Canons*

The Agreement is most analogous to existing canons of medical ethics that prohibit doctors from administering unscientific treatments. The commonality of such canons will likely make a Court hesitate to find them *per se* illegal and instead apply rule-of-reason review.<sup>36</sup>

One circuit court case, *Wilk v. American Medical Association*, held that such canons should receive rule-of-reason review.<sup>37</sup> There, defendants (i.e., the AMA) maintained the following ethical canon: “A physician should practice a method of healing founded on a scientific basis; and he should not voluntarily professionally associate with anyone who violates this principle.”<sup>38</sup> They interpreted this last clause to include chiropractors, such as Wilk and co-plaintiffs.<sup>39</sup>

“Plaintiffs alleged that defendants engaged in a combination and conspiracy to eliminate the chiropractic profession through refusing to deal with plaintiffs and other chiropractors.”<sup>40</sup> The AMA said it promulgated the canon “because defendants respected scientific method as the basis for diagnosis and treatment and were unwilling to risk the health and lives of their patients by associating professionally in the care of patients with persons who (so defendants thought) do not share respect for scientific method.”<sup>41</sup> The court held that this motivation raised “questions of sufficient delicacy and novelty at least to escape *per se* treatment.”<sup>42</sup>

This suggests that the best hope for the survival of an Agreement is to analogize an Agreement to such uncontroversial canons from medical ethics.

*Analogy to Engineering Ethical Canons*

The National Society of Professional Engineers (“NSPE”) also maintains a Code of Ethics.<sup>43</sup> Safety-related canons include:

Engineers, in the fulfillment of their professional duties, shall:

1. Hold paramount the safety, health, and welfare of the public.

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<sup>36</sup> *See id.* at 211–12.

<sup>37</sup> 719 F.2d 207 (7th Cir. 1983).

<sup>38</sup> *Id.* at 213.

<sup>39</sup> *See id.*

<sup>40</sup> *Id.* at 211.

<sup>41</sup> *Id.* at 219.

<sup>42</sup> *Id.* at 222; *see also* *Johnson v. Blue Cross/Blue Shield of New Mexico*, 677 F. Supp. 1112, 1118 (D.N.M. 1987) (applying *Wilk* on similar facts).

<sup>43</sup> *See NSPE Code of Ethics for Engineers*, NAT’L SOC’Y PROF’L ENG’RS (July 2018), <https://perma.cc/9C2R-U29D>.

2. Perform services only in areas of their competence.<sup>44</sup>

Engineers shall hold paramount the safety, health, and welfare of the public.

- a. If engineers' judgment is overruled under circumstances that endanger life or property, they shall notify their employer or client and such other authority as may be appropriate.
- b. Engineers shall approve only those engineering documents that are in conformity with applicable standards.<sup>45</sup>

Engineers shall perform services only in the areas of their competence.

- a. Engineers shall undertake assignments only when qualified by education or experience in the specific technical fields involved.
- b. Engineers shall not affix their signatures to any plans or documents dealing with subject matter in which they lack competence, nor to any plan or document not prepared under their direction and control.<sup>46</sup>

Engineers shall not complete, sign, or seal plans and/or specifications that are not in conformity with applicable engineering standards. If the client or employer insists on such unprofessional conduct, they shall notify the proper authorities and withdraw from further service on the project.<sup>47</sup>

The NSPE has a Board of Ethical Review which publishes advisory opinions interpreting and applying the Code of Ethics.<sup>48</sup> Some of these opinions seemingly restrain trade in the name of either safety or professional competence (which is presumably at least partially a proxy for safety). For example:

- Case No. 98-8, holding that a civil engineer was incompetent to certify that arms storage room satisfied Army regulations and citing public safety reasons.<sup>49</sup>

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<sup>44</sup> *Id.* § I.

<sup>45</sup> *Id.* § II(1).

<sup>46</sup> *Id.* § II(2).

<sup>47</sup> *Id.* § III(2)(b).

<sup>48</sup> See generally *Board of Ethical Review Cases*, NAT'L SOC'Y PROF'L ENG'RS (2017), <https://www.nspe.org/resources/ethics/ethics-resources/nonmember/board-of-ethical-review-cases>. This somewhat resembles a horizontal division of markets, which is illegal under antitrust law.

<sup>49</sup> NSPE Bd. of Ethical Rev., Case No. 98-8 (1998), <https://perma.cc/FG9X-XUCQ>.

- Case No. 08-12, holding that an engineer could not remove emergency exit lights from building specifications to save cost at supervisor's command.<sup>50</sup>
- Case No. 15-4, holding that a computer engineer could not develop a computer program that would understate actual pollution emitted by power generators using that program.<sup>51</sup>
- Case No. 15-11, holding that an engineer could not continue a public works plan wherein the employer requests traffic lanes narrower than those specified by current engineering standards.<sup>52</sup>
- Case No. 16-5, holding that an engineer developing driverless car software had "an obligation to state that the prime ethical obligation of the vehicle operation is to minimize harm to affect the least number of persons" in a hypothetical unavoidable crash.<sup>53</sup>

These canons might also provide solid bases for an Agreement of the type contemplated here. To my knowledge, with the exception of *Professional Engineers*, no plaintiff has alleged that canons of engineering ethics violate antitrust laws. This suggests that analogous safety canons for AI engineers would enjoy some degree of safety from antitrust scrutiny.

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<sup>50</sup> NSPE Bd. of Ethical Rev., Case No. 08-12 (2008), <https://perma.cc/8Z2V-AXV8>.

<sup>51</sup> NSPE Bd. of Ethical Rev., Case No. 15-4 (2015), <https://perma.cc/4ATV-QDKV>. The fact that such underreporting might be illegal was part of the Board's reasoning, but does not seem decisive:

[T]his case . . . involve[s] a clear conflict between the obligation of the engineer to the public health and safety and the obligation to be a faithful agent and trustee to an employer or client.

Balancing the ethical considerations, it is the Board's view that Engineer A's proposed coding would be inconsistent with his obligation to the public health and safety. The Board further notes that such coding would also run a risk that Engineer A, Company X, and its power generation clients could find themselves in violation of state and federal pollution control laws and regulations. While the power generation clients may see some benefit in an equipment feature that will extend the life of the equipment and provide better value to them and other power generating companies that will purchase the equipment, the effect on accurate pollution monitoring is clear and unmistakable and wholly inconsistent with a reading of the NSPE Code of Ethics.

*Id.* at 3.

<sup>52</sup> NSPE Bd. of Ethical Rev., Case No. 15-11 (2015), <https://perma.cc/J3BY-Z94L>.

<sup>53</sup> NSPE Bd. of Ethical Rev., Case No. 16-5 (2016), <https://perma.cc/W37P-XY7E>. Admittedly, this is arguably not anticompetitive at all because the obligation could only require that the engineer "state" an opinion, but not necessarily refuse to engineer a system that would behave contrarily.