

# THE REAL ISSUE BEHIND *STANFORD V. ROCHE*: FAULTY CONCEPTIONS OF UNIVERSITY ASSIGNMENT POLICIES STEMMING FROM THE 1947 BIDDLE REPORT

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*The recent Supreme Court decision in Stanford v. Roche laid bare a faulty assumption of the federal research funding system. Government patent policy for federally funded research relies on “contractors”—the recipients of federal funding—to secure patent assignments from their employees. While this practice was routine for private firms and nonprofit research institutions, it was not for universities. This was in part based on the relationship of faculty and other researchers to universities that differed from industry employment relationships. The roots of this faulty assumption can be traced to the seminal 1947 Biddle Report. Detailed monographs drafted as appendices to the Biddle Report made plain these different practices. Yet the formal report glossed over the differences in favor of a summary that government research patent policy need only concern the relationship between the funding agencies and contractors. This left assignments between the contractors and their employees to the contractors. Despite regulations up through the Bayh-Dole Act of 1980 that obliquely referenced the obligation of contractors to secure adequate rights to protect the government’s interests, universities never adopted the assignment practices of private industry. This Article traces the roots of this issue from the Biddle Report to the current government regulations in order to clarify*

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*challenges that funding agencies and universities face in securing adequate agreements from researchers in the wake of Stanford v. Roche.*

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## INTRODUCTION

The federal government is usually thought of as the issuer of patents. But it also finances and practices patented inventions. Its position as sovereign initially led to confusion as to whether it could practice any patent under a crown rights theory or assert rights to its employees' inventions. As I have explored elsewhere, this led to three intertwined strands of government patent policy: (i) government use of private citizen patents, (ii) government rights to federal employee inventions, and (iii) government rights to federal contractor inventions.<sup>1</sup> This Article focuses on the third strand, and in particular the disposition of rights as between federal contractors and their employees. This issue was at the heart of the Supreme Court's recent decision in *Board of Trustees of Leland Stanford Junior University v. Roche Molecular Systems, Inc.*<sup>2</sup> I argue that a faulty conclusion in a government report at the dawn of university technology transfer led to decades of confusion about the allocation of ownership to inventions at federally funded universities.

The context for this issue resides in six partially conflicting narratives about government patent policy. One is that the government, even as the sovereign and issuer of patents, stands as an ordinary legal person with regard to practicing patents issued to its citizens. A second is that the government's unauthorized practice of a patent is simply the tort of infringement and not a taking of property, so that eminent domain principles do not play a role. A third is that the government as sovereign cannot be sued in its own courts without its consent, and the government has not consented to be sued in tort. A fourth is that patents always vest ab initio with natural person

1. See Sean M. O'Connor, *Taking, Tort, or Crown Right? The Confused Early History of Government Patent Policy*, 12 J. MARSHALL REV. INTELL. PROP. L. 145, 146-53 (2012).

2. Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc., 131 S. Ct. 2188 (2011).

inventors. There can never be corporate person inventors such as there are corporate person authors under the copyright work-made-for-hire doctrine. A fifth is that the government should have some rights to the inventions it finances, if not a public dedication of the inventions as created in trust for the taxpaying American public. A sixth is that the allocation of rights between the government and contractor organizations should not strip employee inventors of their rights.

The seminal report on government patent practices was issued by Attorney General Francis Biddle in 1947 (the “Biddle Report” or the “Report”).<sup>3</sup> The Biddle Report not only framed the debates over government patent policy for both intramural and extramural R&D for decades to come,<sup>4</sup> but it also introduced a crucial mistaken assumption that all government contractors were routinely securing patent assignments from their employees. This arose from a faulty conclusion in the Report’s summary findings that glossed over complicated evidence raised in seventeen monographs provided as appendices to the Report. While the detailed monographs showed that private firms and most nonprofit research organizations were securing assignments, they also indicated that only some universities were doing so. Nonetheless, the Report concluded that contractors were securing title to employee inventions and thus federal policy need focus only on the allocation of rights as between government agencies and their contractors. This recommendation subsequently became a bedrock principle upon which all government patent policy was based up through the passage of the Bayh-Dole Act of 1980.<sup>5</sup>

Although Bayh-Dole focused on the allocation of title primarily between government agencies and their contractors, it continued to rely on the mistaken Biddle Report assumption that contractors were securing assignments from their employees. Bayh-Dole also failed to employ the language of a “vesting statute” that would have transferred title from individual inventors to another entity as a matter of law.<sup>6</sup> Thus, the *Stanford* Court held that

3. U.S. DEP’T OF JUSTICE, 1 INVESTIGATION OF GOVERNMENT PATENT PRACTICES AND POLICIES: REPORT AND RECOMMENDATIONS OF THE ATTORNEY GENERAL TO THE PRESIDENT (1947) [hereinafter BIDDLE REPORT].

4. “Intramural” research means research done by government employees; whereas “extramural” research means research done under grants and contracts to non-governmental entities and individuals. See, e.g., Nat’l Hum. Genome Res. Inst., *Frequently Asked Questions About NHGRI Research*, <http://www.genome.gov/12011002> (last visited Feb. 26, 2013).

5. Bayh-Dole Act, Pub. L. No. 96-517, § 6(209), 94 Stat. 3015 (1980).

6. See *Stanford*, 131 S. Ct. at 2195–99. At the same time, Bayh-Dole provided a mechanism for contractor’s employees to hold title to their inventions in cases where neither the contractor nor the funding agency exercised rights they had under the Act. 35 U.S.C. § 202(d) (2011). This provision was the basis for Stanford University and others to argue that Bayh-Dole must be a vesting statute where employees must petition to get rights to their inventions (i.e., the university and funding agency has superior rights). See *Stanford*, 131 S. Ct. at 2197–98; *id.* at 2200 (Breyer, J., dissenting).

contractors' employees held title ab initio to their inventions in the same manner as other inventors.<sup>7</sup>

But this in turn leads to the question of how government rights to contractor inventions can be secured if the contractor's employees are free to retain title to their inventions or assign it to third parties. Why would the government not have taken care of this by requiring assignments from a contractor's employees to the contractors or passing a vesting statute that allocated title to the contractor by operation of law? This Article reveals not only the mistaken assumption that university employees were assigning their rights to the university, but also the ways in which pre- and post-Bayh-Dole government regulations sought to ensure that contractors were in fact securing appropriate rights to protect government interests. The Article also notes that one reason why the Bayh-Dole assumption has not been disturbed is that lawmakers may have had no need or desire to intervene in the complex arrangements that contractors have with employees and independent contractors. This is especially true in the case of universities, which have quasi-independent faculty, affiliated researchers, and students who sometimes act as research employees.

Part I sets the stage and provides context for the issuance of the Biddle Report. Part II then details the circumstances of the Biddle Report's faulty conclusion as well as its adoption as a baseline assumption of government patent policy in the Kennedy and Nixon administrations. This Part also notes that regulations during this period did in fact impose obligations on contractors to secure adequate rights (if not full title) from their employees in order to protect government interests. Part III sets out the passage of Bayh-Dole and its implementing regulations, which continued the contractor obligations set by earlier laws. Finally, Part IV reviews the case law involving contractors and their employee inventors and shows how the mistaken assumption arising from the Biddle Report continues to generate confusion and challenges for government patent policy.

## I. SETTING THE STAGE FOR THE BIDDLE REPORT

As the twentieth century opened, three strands of government patent policy existed including (1) government use of private citizen patents, (2) title to government-employee inventions, and (3) title to contractor inventions. While none of these were governed by statutory law,<sup>8</sup> significant case

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7. *Id.* at 2194–99 (majority opinion).

8. *See* O'Connor, *supra* note 1, at 180. Government use of privately held patents was limited to suit for compensation in the Court of Claims where the owner could establish a breach of implied contract. *Id.* Government rights to employee inventions were limited, with the normal result being a shop right license—even where the employee was hired to invent. *Id.* Other than the Patent Act, the only other relevant statute at this time was a section of the Appropriation Act of Mar. 3, 1883, 22 Stat. 625, regarding government employee inventions which is discussed in more detail below.

law had developed around the first two. The question of government rights to contractor inventions remained untested by the courts.<sup>9</sup> Once courts began to address this question, some considered the relationship of the government to its contractors as analogous to that of the government and its employees. Accordingly, this section reviews the case law of government-employee inventions to set the stage for the Biddle Report.

The cases fall into two different periods. The first period, running from 1870 through the end of the century, focused exclusively on the question of whether government employees were bound by the same shop rights doctrine that bound private firm employees. The second period, running from the 1920s until 1933, combined shop rights issues with changing interpretations of, and revisions to, an 1883 statute that authorized the Patent Office to issue patents to government employees at no cost provided that such applicants permitted free government use of the patented invention.<sup>10</sup>

The first set of cases originated from the 1870 Supreme Court decision in *Burns v. United States*.<sup>11</sup> In that case, the Supreme Court suggested in dicta that if the government hired an individual specifically to invent something, then the government would have at least a shop rights nonexclusive license, if not outright ownership of any resultant patentable invention.<sup>12</sup> Two decades later, however, the Court directly ruled that a government employee could in fact retain title to a patent on an invention that he was hired to invent, while denying his claims seeking compensation from the government on a theory of unjust enrichment.<sup>13</sup> This seemed to set a less onerous standard of shop rights for government employees as compared to private company employees who would have to assign the invention under these same circumstances.<sup>14</sup> The Court later rejected a government employee's claim that the license of his invention to the government was valid only so

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9. O'Connor, *supra* note 1, at 180.

10. *See supra* note 8.

11. *Burns v. United States*, 79 U.S. (12 Wall.) 246 (1870).

12. *Id.* at 252 ("If an officer in the military service, *not specially employed to make experiments with a view to suggest improvements*, devises a new and valuable improvement in arms, tents, or any other kind of war material, he is entitled to the benefit of it, and to letters-patent for the improvement from the United States, equally with any other citizen not engaged in such service; and the government cannot, after the patent is issued, make use of the improvement any more than a private individual, without license of the inventor or making compensation to him." (emphasis added)). By contrast, however, private employers were able to secure shop rights to inventions developed by employees using employer time or resources, regardless of whether the employees were specifically hired to invent. *See McClurg v. Kingsland*, 42 U.S. (1 How.) 202 (1843) (inventor's development of patented invention with employer's resources, pay raise for invention, and assent to its use by employer at no charge established equitable or implied "shop right" license in employer).

13. *Solomons v. United States*, 137 U.S. 342 (1890).

14. *See, e.g., Hapgood v. Hewitt*, 119 U.S. 226 (1886) (holding that employee who had been hired to invent must transfer patent title to his employer so long as he had expressly agreed to do so).

long as he was employed by the government, primarily because the license did not explicitly state such a limitation.<sup>15</sup> Turning to the question of patents held by inventors *before* they became government employees, the Court affirmed a Court of Claims decision that such inventors do not receive unjust enrichment when they seek compensation from the government for the use of their patented inventions.<sup>16</sup> At the end of the century, however, the Court held that a government employee who invented on his own time, but then used government resources to actually reduce the invention to practice and also allowed it to be used by the government with no conditions or request for compensation, had granted the government an implied license.<sup>17</sup>

The second set of cases had its roots in the enactment of the 1883 statute, but the cases themselves were not decided until the 1920s and 1930s. The statute was passed as part of an appropriations bill, but it was oddly situated within the section for the United States Geological Survey (the “1883 Act”).<sup>18</sup> It provided that:

The Secretary of the Interior and the Commissioner of Patents are authorized to grant any officer of the government, except officers and employees of the Patent Office, a patent for any [eligible] invention . . . when such invention is used or to be used in the public service, without the payment of any fee: *Provided*, That the applicant in his application shall state that the invention described therein, if patented, may be used by the government or any of its officers or employees in the prosecution of work for the government, *or by any other person in the United States*, without the payment to him of any royalty thereon, which stipulation shall be included in the patent.<sup>19</sup>

Although it seems most natural to read the emphasized clause to mean that “any other person in the United States” encompassed only contractors engaged in government work, this was debated in the courts.<sup>20</sup> Further muddy-

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15. *McAleer v. United States*, 150 U.S. 424 (1893). Two other decisions that year further fleshed out the shop rights doctrine for private firms. In *Lane & Bodley Co. v. Locke*, 150 U.S. 193 (1893), the Supreme Court held that where an employee conducts experiments at his private employer’s expense, and then remains employed for a long time with full knowledge that the resultant invention was being used by the employer, the employee would be deemed to have granted an implied license to the employer. In *Dalzell v. Dueber Watch-Case Manufacturing Co.*, 149 U.S. 315 (1893), the Supreme Court held that the express agreement required to invoke the hired-to-invent exception and equitably convey patent rights to private employers need not be in writing.

16. *Talbert v. United States*, 155 U.S. 45 (1894).

17. *Gill v. United States*, 160 U.S. 426 (1896).

18. Act of Mar. 3, 1883, 22 Stat. 625.

19. *Id.* (second emphasis added).

20. *See, e.g., Squier v. Am. Tel. & Tel. Co.*, 21 F.2d 747, 748–50 (S.D.N.Y. 1924) (discussing this controversy); *see also id.* at 752 (arguing that the “plain language” of the statute required a public dedication of covered patents based in part on Patent Office’s long-

ing the waters, the Judge Advocate General of the Army changed positions in 1918 from supporting the public dedication interpretation to adopt the position that “any other person” meant government contractors only.<sup>21</sup>

In 1928, the 1883 Act was amended to make clear that patents issued under it were *not* dedicated to the public (the “1928 Amendment”).<sup>22</sup> However, some courts treated this as a change in the law, not a clarification.<sup>23</sup> Further, some government departments had issued regulations requiring employees to file under the 1883 Act, with the express condition that the invention would then be dedicated to the public.<sup>24</sup> Thus, in one case, a court upheld these regulations for a patent filed before the 1928 Amendment.<sup>25</sup>

At the same time, some courts were expanding the scope of the hired-to-invent exception to shop rights to find more instances where government employees were required to assign their patents to the government.<sup>26</sup> In some cases this seemed to be based upon a judge’s belief that inventions arising from taxpayer dollars should be freely available to all, notwithstanding the

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standing, and apparently unchallenged, practice of stamping “Dedicated to the Public” legends on patents issued under the statute).

21. *See id.* at 750.

22. Act of Apr. 30, 1928, 45 Stat. 467. Concerns over government-related patents as early as World War I had led to the creation of the Army and Navy Patent Board. *See Squier*, 21 F.2d at 750. After the war, an unsuccessful bill sponsored by the Interior Department would have provided for voluntary assignment or license of patents by any government employee to the Federal Trade Commission (“FTC”). *See United States v. Dubilier Condenser Co.*, 289 U.S. 178, 205–06 (1933). The FTC would then have licensed the patents to manufacturers, with any resultant license fees paid into the Treasury and whatever portion might be deemed equitable paid to the inventor. *Id.* In 1923, an ad hoc interdepartmental patents board recommended regulations establishing that, in the absence of a contract to the contrary, government employees retain ownership of their inventions. *Id.* The rationale was that a dedication to the public would defeat the purpose and incentive of a patent. *Id.* at 206. It also strongly rejected proposals that government employees be required to assign their inventions to the government, on the basis that it would be very difficult to attract and retain talented individuals to the already low paying government positions. *Id.* at 206–07. However, the board did recommend legislation to establish a permanent board with the power to demand assignment of government employee patents where the inventions were related to national defense or otherwise in the public interest. *Id.* at 207. This may have been one of the roots of the later “vesting statutes” assigning inventions to the government in matters of national interest and security. *See infra* Part III.B.

23. *See Selden Co. v. Nat’l Aniline & Chem. Co.*, 48 F.2d 270, 272–73 (W.D.N.Y. 1930).

24. *See id.*

25. *See id.*

26. *See, e.g., Houghton v. United States*, 23 F.2d 386 (1928) (affirming a lower court holding that assigned title to the government on a finding that even though the employee had not originally been hired to invent, he was later engaged for a special project and paid solely for that work). This decision was likely based in part on the Supreme Court’s 1924 ruling in favor of equitable assignment of title under the hired-to-invent exception in *Standard Parts Co. v. Peck*, 264 U.S. 52 (1924). The Court cited the dicta on the shop rights rule and its hired-to-invent exception in *Solomons v. United States*, 137 U.S. 342 (1890), and *Gill v. United States*, 160 U.S. 426 (1896), as defining the standard in such cases. *Houghton*, 23 F.2d at 390.

1928 Amendment.<sup>27</sup> These developments limited the effectiveness of the 1928 Amendment for government employees.

The Supreme Court brought some clarity to these issues in its landmark shop rights ruling, *United States v. Dubilier Condenser Corp.*<sup>28</sup> The Court affirmed the lower court's ruling that government employees who filed patent applications at their own cost, and not under the 1883 Act, did not have to assign them to the government absent evidence that the employees were hired to invent.<sup>29</sup> The Court seemed to signal that the scope of the hired-to-invent exception to the shop rights rule had expanded too far.<sup>30</sup> It may also have been signaling that it did not approve of the growing sense in some circles that all inventions by government employees using government resources should be dedicated to the public.<sup>31</sup>

In summary, while contractor ownership of federally funded inventions was not addressed in cases or statutes before the 1930s, there was extensive development of the law regarding government employee inventions. In particular, this case law, together with that covering unauthorized use of private citizen patents,<sup>32</sup> set the stage for the attempted creation of a formal government patent policy. Five out of the six policy narratives listed in the introduction were developed during this period.<sup>33</sup> First, it was established that the government had no special rights to practice private citizen patents without authorization.<sup>34</sup> Second, such unauthorized use was not a taking or exercise of eminent domain, but only a tort.<sup>35</sup> Third, because the government had not consented to be sued in its courts for torts, this left aggrieved patent owners with a sole remedy of compensation in the Court of Claims.<sup>36</sup> Fourth, ownership of patents vests ab initio with the natural person inventors, and thus neither a corporation nor the government could have original ownership of an invention.<sup>37</sup> And fifth, the government should have some rights to the

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27. *Id.* at 391 (“It is unthinkable that, where a valuable instrument in the war against disease is developed by a public agency through the use of public funds, the public servants employed in its production should be allowed to monopolize it for private gain and levy a tribute upon the public which has paid for its production, upon merely granting a nonexclusive license [to the government].”).

28. *United States v. Dubilier Condenser Corp.*, 289 U.S. 178 (1933).

29. *Id.* at 182–85, 193, 203, 206.

30. This is suggested by the exhaustive manner in which the Court reviewed every major relevant development in the law since *Burns*.

31. In fact, three justices dissented and sided with the government that federally funded patents should be dedicated to the public. *Dubilier*, 289 U.S. at 209–24.

32. See generally O'Connor, *supra* note 1.

33. See *supra* text accompanying notes 2–3.

34. Although it did have a de facto shield against injunctions based on sovereign immunity and the limit to compensatory damages in awarded in the Court of Claims under the Patent Act of 1855, ch. 122, 10 Stat. 612, 612. See O'Connor, *supra* note 1, at 155–80.

35. *Id.*

36. *Id.*

37. *Id.* The corollary of this is that ownership by corporations or the government could only come about through assignments from the natural person inventors.



inventions it funds, possibly including full public dedication. This left only the sixth policy narrative—the question of how the relationship between the government and a contracting entity should affect the invention rights of the contractor’s employees—completely unaddressed.

This sixth issue would only begin to be addressed when the government began to consider a uniform patent policy for both intramural and extramural research. However, most of the government’s funded research was devoted to agriculture and the development of land resources before World War II<sup>38</sup>—areas that had relatively few utility patents at that time.<sup>39</sup> Thus, there was apparently little pressing need for a uniform government patent policy. Yet, in both the private sector and in nonprofit research institutions, employers began routinely requiring assignments of all employee inventions.<sup>40</sup> At the same time, universities and their faculty varied widely as to assignment practice and policies.<sup>41</sup> While some faculty began assigning their inventions to their employing university as early as World War I,<sup>42</sup> other universities either did not require assignments or, in some cases, would not even have accepted them.<sup>43</sup> Some universities formalized institutional patent policies that required, permitted, or prohibited assignments of faculty inventions.<sup>44</sup> Thus, going into World War II, the status of university assignment policies was far from uniform, while industry norms and nonprofit research institutions generally required assignment of employee inventions.

## II. THE BIDDLE REPORT AND POST-WAR PATENT POLICY INITIATIVES FOR GOVERNMENT RESEARCH

As World War II ushered in a dramatic increase in federal funding of intramural and extramural science and technology, the government found

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38. See 1 BIDDLE REPORT, *supra* note 3, at 13.

39. In fact, the Plant Patent Act was passed in 1930 both because plants were difficult to patent under the regular utility patent system and because there was some precedent that they were “products of nature” and thus not eligible for patent protection. See *Diamond v. Chakrabarty*, 447 U.S. 303, 310–14 (1980).

40. See 1 BIDDLE REPORT, *supra* note 3, at 88; 3 BIDDLE REPORT, *supra* note 3, at 3–17.

41. 3 BIDDLE REPORT, *supra* note 3, at 17–57.

42. See, e.g., U.S. Patent No. 1,212,945 (filed Oct. 3, 1915) (assigned to Kansas Agricultural College); U.S. Patent No. 1,218,472 (filed Oct. 8, 1915) (assigned to University of California, by agreement); U.S. Patent No. 1,392,767 (filed June 7, 1916) (assigned to University of Minnesota); and U.S. Patent No. 1,491,900 (filed Mar. 25, 1922) (assigned to University of Arizona). Accordingly, by the 1930s, a number of universities had adopted institutional patenting policies. See RICHARD SPENCER, *UNIVERSITY PATENT POLICIES* (1939). The Author thanks Gregg Graff for pointing out this source and the patent assignment citations.

43. 3 BIDDLE REPORT, *supra* note 3, at 17.

44. Archie MacInnes Palmer, *University Patent Policies*, 6 J. PAT. OFF. SOC’Y 96 (1934) (documenting that Columbia University, St. Louis University, and the University of Illinois had instituted patent policies by the 1930s).

itself funding patented inventions more than ever before.<sup>45</sup> Therefore, President Roosevelt desired to finally establish a uniform, government-wide patent policy for government employees and contractors.<sup>46</sup> In 1943, he requested that the Attorney General undertake a comprehensive investigation of the nature and extent of government patent policies.<sup>47</sup> The request sought to answer a single question: “What disposition of patent rights as between the Government, its employee or contractor, and what use of patent rights owned by the Government, will best serve the public welfare and stimulate the progress of science and the useful arts?”<sup>48</sup>

While the Biddle Report would not be issued for a few years, patent policy concerning government research continued to progress. In 1944, Roosevelt issued an executive order to create a separate register in the Patent Office to record *all* government rights in patents.<sup>49</sup> The substantial increase in extramural research funding also spurred agencies and departments to create standard practices for research grants and contracts. By the end of the war, both research contracts and grant funding agreements generally allowed the contractor or the contractor’s employees to retain title, while the government took a nonexclusive license.<sup>50</sup> Accordingly, the issue of invention rights between contractors and their employees was now formally acknowledged.

#### A. *The Biddle Report*

In 1947, the Department of Justice issued the Biddle Report as its response to Roosevelt’s request. The Report spanned three volumes under the title “Investigation of Government Patent Practices and Policies, Report and Recommendations of the Attorney General to the President.” It is hard to overstate the influence of this document. Within it lay all the major concepts of what would become the field of technology transfer. The Report also framed virtually all of the policy debates that continue to this day.

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45. 1 BIDDLE REPORT, *supra* note 3, at 13–16. Approximately \$1.7 billion was spent on government research during World War II: the War Department alone spent an unprecedented \$800 million on overall R&D during the five fiscal years 1940–44, with two-thirds of that paid under contracts to private industry, *id.* at 79; the Office of Scientific Research and Development spent almost half a billion dollars on extramural research from 1941–46, *id.* at 81; and the Navy Department spent \$400 Million during the fiscal years 1940–44, with 75% of that going to extramural projects. *Id.* at 82. For an excellent general history of the development of government patent policy from World War II to the 1990s, see Rebecca S. Eisenberg, *Public Research and Private Development: Patents and Technology Transfer in Government Sponsored Research*, 82 VA. L. REV. 1663 (1996).

46. *Id.* at 9.

47. *Id.*

48. *Id.*

49. Exec. Order No. 9424, 9 Fed. Reg. 1959 (Feb. 22, 1944). Earlier attempts at tracking government patent rights were limited to specific departments or agencies. *See, e.g.*, discussion *supra* note 22 (discussing the Army and Navy Patent Board).

50. *See* 1 BIDDLE REPORT, *supra* note 3, at 77–86.

The Biddle Report's summary sets out the structure of its content. It provides both "findings and conclusions" and "recommendations" for each of eight topical areas: (i) "Patent Aspects of Government Research," (ii) "Inventions Made By Government Employees," (iii) "Rewards to Employees," (iv) "Inventions Made By Government Contractors," (v) "Administration of Government-Owned Patent Rights," (vi) "Foreign Rights," (vii) "Secrecy," and (viii) "Uniform Patent Policy and Procedure."<sup>51</sup> The findings and conclusions are perhaps too conclusory and are better described as normative policy positions. The Report was based on research compiled in seventeen monographs accompanying the publication as appendices. One of its major themes is that the use of public funds for R&D should lead to public control and access to any resultant inventions. While the fourth topical area of the Report is the most relevant to this Article, some of the other sections provide helpful context. The recommendations of the second section advocated a stricter hired-to-invent rule for government employees than had been found as a matter of common law by the *Dubilier* Court.<sup>52</sup> Those of section five suggested that all government-owned patents should be made freely available to the public, either through public dedication or royalty-free nonexclusive licenses.<sup>53</sup> And the findings in the eighth section recommended that the government should establish a Government Patents Administration to administer a government-wide uniform patent policy.<sup>54</sup>

The recommendations of section four for contractor inventions are central to the development of Bayh-Dole, and ultimately the contractor's employee issue in *Stanford v. Roche*. They are covered in detail in chapter four of the Report.<sup>55</sup> The first recommendation called for government agencies to stipulate in all R&D contracts that the government would own all rights to

51. *Id.* at 2–8.

52. The government should obtain all rights to inventions made by government employees: (i) during working hours; (ii) with a substantial contribution by the government in the form of facilities, equipment, materials, funds, information, time paid for by the government, or services of other government personnel; or (iii) which bear a direct relation to the employee's official duties. *Id.* at 2. In cases of minimal use of government resources or a tenuous relationship between the invention and the employee's official functions, ownership could be left with the employee, provided that the government retained a perpetual, nonexclusive, irrevocable, royalty-free license to make, have made, use and dispose of the invention, and provided further that the employee was obligated to exploit the invention diligently herself or grant nonexclusive licenses at a reasonable royalty to all applicants. *Id.* at 3. In all other cases, rights should be left to the employee. *Id.*

53. *Id.* at 6. If further risky development were needed so that private firms could market the invention, then the government should finance such development. *Id.* However, the Report still maintained that patenting of such inventions was superior to simply dedicating them to the public, because patenting would afford greater protection and control of the invention for the public interest. *Id.*

54. *Id.* at 8. One objective of the government-wide policy was to "avoid competition among the agencies, and . . . strengthen the government's bargaining position." *Id.*

55. *Id.* at 76–110.

inventions arising under those agreements.<sup>56</sup> The second allowed that if the head of an agency certified that an “emergency situation” existed, then with the approval of a central Government Patents Administrator the agency could award a contract allowing the contractor to retain title to any patentable inventions arising under it.<sup>57</sup> However, any such exceptional contract would be subject to the following conditions: (a) the head of the agency and the Administrator would certify that the agency made reasonable, but unsuccessful, efforts to find a contractor that would accept federal ownership of patents; (b) the contract would stipulate that the contractor would retain patent rights only to those inventions in which its independent contribution antedated the work called for in the contract; (c) the contractor would grant the United States a perpetual, nonexclusive, irrevocable, royalty-free license to make, have made, use, and dispose of any inventions awarded to it under the contract; and (d) the contractor (or its assignee) would agree to place the invention in adequate commercial use within a designated period, and if the government determined that such use was not being made by the end of such time period, then the contractor (or its assignee) would be required to offer nonexclusive licenses at a reasonable royalty to all applicants.<sup>58</sup> The license and commercialization conditions became bedrock components to government patent policy. Ultimately, these conditions would be codified as the “Government License” and “March-in Rights,” in Bayh-Dole, by way of the Kennedy Patent Policy<sup>59</sup> and the General Services Administration (“GSA”) Regulations, respectively.<sup>60</sup> The government contractor findings and recommendations also established the terminology and two basic patent policy models of “title” and “license.” In a title model, the government would take title to the inventions. In a license model, the contractor would retain title, but grant the government a nonexclusive license. Finally, the third and fourth recommendations were for government agencies to treat cooperative research projects and research grants, respectively, in the same manner as R&D contracts.<sup>61</sup>

So far so good, but the chapter four’s focus was almost exclusively on the relationship between contractors and government, with little regard for the rights of a contractor’s employees.<sup>62</sup> It only briefly summarized the law

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56. *Id.* at 76.

57. *Id.*

58. *Id.*

59. *See infra* Part II.B.

60. *See infra* Part II.C.

61. *See* 1 BIDDLE REPORT, *supra* note 3, at 76.

62. *Id.* at 77 (“Since the relationship between the Government and the contractor arises from an agreement between them, their rights and obligations depend essentially upon the terms of the agreement and the inferences to be drawn therefrom. The contract may explicitly dispose of rights to inventions made in the course of performance, either *in toto* to one of the parties or in part to each. For example, the Government may expressly obtain the right to an assignment of all patent rights, or may reserve only a nonexclusive license leaving the patents

regarding inventorship and initial ownership of patents (which remains the same today)<sup>63</sup> to make clear that patent rights vest ab initio in natural person inventors:

Under our law, a patentable invention can be made only by an individual or by several individuals working jointly. Since the Government contractor is usually a corporation or an institution, the latter's agreement to make some or all of the patent rights available to the Government requires a corresponding obligation on the part of the contractors' employees who engage in performing the research contract. Such an obligation is as a general rule imposed expressly by the employment contract.<sup>64</sup>

It then summarized the extensive research that the Attorney General's staff performed on the actual practices of private industry, nonprofit research organizations, and universities, as reported in the monographs, and declared that:

[T]he scientific and technical employees of almost all industrial organizations are under contract to assign their patent rights to the employer, and *most* academic and other noncommercial institutions likewise require assignment of patent rights by members of their staff who have been detailed to perform research contracts with third parties.<sup>65</sup>

This summary put particular emphasis on the monograph finding that employees of nonprofit contractors were willing to dedicate their inventions to the public or assign them to the government.<sup>66</sup> The drafters thus concluded that: "the disposition of rights to inventions made under a Government-financed research contract involves *the allocation between Government and contractor* of the power to exclude others from using the invention, or to permit such use upon payment of a royalty or compliance with some other legal condition."<sup>67</sup> This left the task of securing rights from contractors' employees to the contractors. The Report never explicitly recommended that

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to the contractor; or the parties may agree that the resulting inventions should be dedicated to the public. The courts will respect and enforce any disposition thus agreed to so long as no statute or other dominant rule of law stands in the way.").

63. See Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc., 131 S. Ct. 2188, 2194–95 (2011).

64. 1 BIDDLE REPORT, *supra* note 3, at 78.

65. *Id.* at 88 (emphasis added).

66. See, e.g., *id.* at 79 (stating that nonprofit contractor employees working on Department of the Interior cooperative research agreements generally either dedicate their inventions to the public or assign them to the Department). These points also seemed to support the recommendation that the government should implement a title policy because willing contractors could be found who would agree to assign their inventions to the government.

67. *Id.* (emphasis added).

government policy should step into the contractor-employee relationship. In this way, it simply mirrored business-to-business contracting in which each legal entity is responsible to secure the necessary IP, confidentiality, and other rights from its employees and independent contractors. But this reliance on the other party's arrangements with its employees only works where the parties require assignments and confidentiality as a rule. It does not work so well when one of the parties either cannot or customarily does not require such obligations from its employees.

The question then becomes: how well did the Report monographs actually support the statement that “*most* academic and other noncommercial institutions likewise require assignment of patent rights by members of their staff who have been detailed to perform research contracts with third parties?”<sup>68</sup> The two most relevant monographs to this analysis are “Patent Policies and Practices of Educational and Other Nonprofit Organizations” (the “Educational and Nonprofit Monograph”)<sup>69</sup> and “Principles of Law Applicable to the Interest of the United States in Inventions Made by Its Employees and Contractors” (the “Law Monograph”).<sup>70</sup> The first separated its discussion into “Private Research Organizations” and “Educational Institutions.”<sup>71</sup> It surveyed the patent practices of seventeen research organizations.<sup>72</sup> Yet, while the Educational and Nonprofit Monograph concluded that “[p]rivate research organizations . . . require their inventors to assign or dedicate their inventions as directed,”<sup>73</sup> only five out of seventeen organizations discussed had express employee-invention assignments in place.<sup>74</sup> The report implied

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68. *Id.* at 88.

69. 3 BIDDLE REPORT at 3–57.

70. *Id.* at 127–61.

71. *See id.* at 3.

72. The Mellon Institute of Industrial Research, Battelle Memorial Institute, Trade Association Research Groups, American Petroleum Institute, Underwriters' Laboratories Inc., Research Corporation, Chemical Foundation, Franklin Institute—Bartol Research Foundation, Carnegie Institute of Washington, Rockefeller Institute for Medical Research, John McCormick Institute for Infectious Diseases, The Engineering Foundation, American Chemical Society, American Medical Association, Midwest Research Institute, Southern Research Institute, and Armour Research Foundation. *See id.* at 3–17. Note that one of these, “Trade Association Research Groups,” was really a generic name for the class of specific trade associations. *See id.* at 6–7. In fact, two such specific groups—American Petroleum Institute and Underwriters' Laboratories, Inc.—were themselves discussed separately as research organizations. *See id.* at 7–8. Thus, there were really only sixteen research organizations directly discussed.

73. *Id.* at 53–54.

74. These organizations are: The Mellon Institute of Industrial Research, *id.* at 5; Franklin Institute—Bartol Research Foundation, *id.* at 12; Midwest Research Institute, *id.* at 14 (with regard to patent rights, the Monograph only states that “[i]ndividual industries which sponsor projects receive title to any resulting patents and the work is prosecuted in the degree of confidence required by the company,” however it seems a reasonable inference that the Institute must then have assignment and confidentiality obligations in place from its researchers); Southern Research Institute, *id.* at 15 (similar to the text on Midwest Research Institute, the relevant text here only says that “[a]ll discoveries resulting from sponsored projects be-

that one organization had an assignment policy.<sup>75</sup> Eleven others were primarily foundations that sponsored or funded research at other institutions. While this monograph noted that the foundations required either dedication to the public or assignment of inventions arising from funded research, this observation only provides that some research organizations receiving funding were able to secure rights from their researchers sufficient to do this. The observation does not answer how many organizations did so, whether researchers at those organizations were always bound to assign or dedicate their inventions, or whether such researchers agreed to do so only for purposes of the funding agreement from the foundations. Thus, the conclusion of the Educational and Nonprofit Monograph regarding private research organizations is technically correct, but a bit misleading. It also suffers from a small sample—especially when one considers that only five, possibly six, of the organizations were shown to have blanket assignment policies for their employee researchers.

The section on educational institutions in the Educational and Nonprofit Monograph is even more problematic. Of forty universities surveyed, only eight had what I call “unconditional general assignment” policies,<sup>76</sup> under which staff were obligated to assign all inventions. From the remaining thirty-two, ten schools required assignment only for special projects or sponsored research.<sup>77</sup> In these cases, a number of the projects requiring assignment were limited to health or medicine. Four universities decided allocation of title on a case-by-case basis.<sup>78</sup> Four universities had a strong shop-rights-type allocation system in place whereby inventions made using university facilities must be assigned to the university.<sup>79</sup> One university had a mandatory assignment of all rights within the state in which the school was

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come the exclusive property of the sponsor,” likewise clearly implying that the Institute has the requisite rights from researchers); Armour Research Foundation, *id.* at 16.

75. The John McCormick Institute for Infectious Diseases “adopted a policy in favor of taking out patents at the expense of the Institute and dedicating them to the public ‘in such manner as the Institute may deem most effective.’” *Id.* at 13. Thus, it would seem that the Institute must have had assignment agreements in place with its researchers, although this is by no means certain based only on the details in the Educational and Nonprofits Monograph.

76. California Institute of Technology, University of Chicago, University of Florida, Georgia School of Technology, University of Illinois, Iowa State College, Massachusetts Institute of Technology, University of Notre Dame. *See id.* at 18, 20–23, 29–33, 36–37, 41.

77. University of Cincinnati, Columbia University, Harvard University, Johns Hopkins University, Lawrence College, University of Maryland, University of Michigan, University of Minnesota, Princeton University, and University of Wisconsin. *See id.* at 23–28, 31, 33–34, 36, 37–41, 44–45, 51–53.

78. University of California, Purdue University, Stanford University, and Virginia Polytechnic Institute. *See id.* at 18, 45–46, 47–48.

79. Carnegie Institute of Technology, Lehigh University, University of Pennsylvania, and Pennsylvania State College. *See id.* at 20–43. In the normal shop rights system, employees would only be required to assign title if they were hired to invent the patentable invention. *See, e.g., United States v. Dubilier Condenser Corp.*, 289 U.S. 178, 186–209 (1933).

located, with rights outside of the state left to the inventor.<sup>80</sup> Another had a mixed system whereby rights to inventions arising from sponsored projects were assigned, but all other inventions were allocated along the common law shop rights rules.<sup>81</sup> The remaining twelve universities had no assignment requirements at all (although many allowed or encouraged assignments through an affiliated patent management entity of the university).<sup>82</sup>

Nevertheless, the Educational and Nonprofit Monograph summarizes its survey by stating that “[i]n about one-half of the institutions . . . patent rights . . . are to be assigned to the institution rather than retained by the inventor.”<sup>83</sup> It appears that the drafters arrived at this estimate by grouping together unconditional assignment schools with shop rights schools and sponsored projects schools.<sup>84</sup> Further, the monograph lists four schools as providing case-by-case assignments—but this list differs from mine.<sup>85</sup> If these are added to the total of “assignment” schools, then a majority of schools surveyed “require” assignment. However, this is misleading, as patent policies were in flux,<sup>86</sup> and it was not clear whether government grants would constitute “sponsored projects” at the sponsored projects schools. If government grants did not fall within the definition of sponsored projects for these schools, then the schools would effectively be “no assignment” schools for purposes of government patent policy.<sup>87</sup> In this scenario, only sixteen

80. Colorado School of Mines. See 3 BIDDLE REPORT, *supra* note 3, at 24.

81. University of Maine. *Id.* at 35–36.

82. Cornell University, Dartmouth College, University of Kansas, Lafayette College, Ohio State University, Rutgers University, St. Louis University, University of Texas, University of Toronto, State College of Washington, Wittenberg College, and Yale University. See *id.* at 29–53.

83. *Id.* at 55.

84. The Monograph lists the following twenty schools: (i) California Tech, Carnegie Tech, Chicago, Cincinnati, Florida, Georgia Tech, Illinois, Iowa State, Lehigh, Maine, M.I.T., Notre Dame, Pennsylvania, Penn. State, and Stanford; and (ii) Columbia, Johns Hopkins, Harvard, Yale, and Colorado School of Mines. It expressly admits including shop right assignment schools in (i) and schools that limit assignment to inventions in health or medicine in (ii). *Id.* However, Cincinnati was a sponsored projects assignment school. See *id.* at 23–24. Maine’s shop rights system was that of the common law, and thus would normally grant shop rights only to the school, except where the researcher was specifically hired to invent. See *id.* at 35–36. That would put it more in the category of a sponsored projects assignment school. I list it as a “mixed” school. And Stanford’s assignments were done on a case-by-case basis. See *id.* at 47–48. For that matter, California’s assignments were done on a case-by-case basis as well, and yet it is not listed as an assignment school. See *id.* at 18–19.

85. The Monograph lists California, Princeton, Purdue, and V.P.I., *id.* at 55, while I list California, Purdue, Stanford, and V.P.I.

86. A number of schools were formulating or changing policies, and in a number of cases, adding patent management entities (and presumably forging policies to profit off patents) following the success of the Wisconsin Alumni Research Foundation. *Id.* at 18, 56–57.

87. By contrast, government contracts (and possibly cooperative research agreements) might fall under the definition of sponsored projects at these schools. To the extent the school entered into these kinds of government funding agreements, it could be considered an “assignment” school.



schools would then have assignment policies that would allow a grant award agreement from the government to allocate patent rights.<sup>88</sup> In health or medicine, though, this would bring the total back up to twenty. Further, although the sample size here is better than that for private research organizations, there also might be many more educational institutions than private research organizations. Plus, a paper cited by the Report asserted that a majority of schools did not compel assignments except in cases of cooperative research.<sup>89</sup> Accordingly, at best, only a slight majority of universities had policies in place allowing for government funding agreements to allocate patent rights (because the university's employees would already be obligated to assign their rights). However, it was equally likely that this was the case for half or fewer of surveyed universities. Therefore, any inference that "most" universities required assignments for "members of their staff who have been detailed to perform research contracts with third parties"<sup>90</sup> was a stretch (unless one interprets "most" to mean a slight majority), and relied on government grants being considered to be sponsored projects within the policy of the sponsored projects assignment schools.

Even if "most" schools had policies supporting assignment in the case of all types of government funding agreements, these policies could be changed by the school at any time, and thus the Law Monograph attempted to explain how contractors and their employees might still be bound in the absence of clear contracts or policies. Restating the Educational and Nonprofit Monograph, the Law Monograph stated that "[i]t is the general practice of many industrial and institutional research organizations to require their employees to assign to the employer any inventions made in the course of employment."<sup>91</sup> While the drafters were careful to use the limiting qualifier "many," the impression this statement leaves is that as a general matter, employees will be obligated to assign all inventions made in the course of employment. But although this might have been true for industry, and even for private research organizations, it was certainly not true for universities. And the importance of having such a requirement was clear to the drafters: "Such an arrangement guarantees the ability of the contractor to perform his undertaking to the Government, for example, where the contract stipulates that the resulting patent rights will be assigned to the United States."<sup>92</sup> To cover the

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88. The eight unconditional assignment schools, four case-by-case schools, plus the shop rights schools.

89. *Id.* at 17–18 (quoting W.T. Middlebrook, *Universities and Patents*, Minutes of the Thirty-Fourth Annual Meeting of the Central Association of University and College Business Officers (Feb. 1945)).

90. 1 BIDDLE REPORT, *supra* note 3, at 88.

91. 3 BIDDLE REPORT at 158 (citing both Educational and Nonprofit Monograph and "Patent Policies and Practices of Industrial Laboratories Concerning Inventions of Employees and Contractors," *id.* at 62–66 ("Industrial Monograph")).

92. *Id.* at 158 & n.180 (citing Navy Monograph and War Monograph to support proposition that "[g]overnment research contracts frequently contain a provision whereby the con-

obvious gap, the drafters then advanced the novel argument that “even where there is no express agreement between the contractor and his employees, they may be held bound by the contract between the employer and the Government if, with knowledge of its provisions, they accept a detail to the research project authorized by the contract.”<sup>93</sup> To support both this point, and the larger idea that even in the absence of a formal patent rights allocation clause courts will likely treat the contractor as an employee who is hired to invent,<sup>94</sup> the Law Monograph reviewed the “only case on point” for this proposition: *Ordnance Engineering Corp. v. United States*, a Court of Claims decision from 1929.<sup>95</sup> The problem is that the Court of Claims granted the government only a shop rights license to the federally funded inventions and not ownership.<sup>96</sup> The government had argued that it should receive equitable title to the inventions, and the court quoted a statement about equitable title from the government’s brief.<sup>97</sup> The Law Monograph then attempted to elevate this statement to a rule of law, even as it conceded that “a license was adequate to sustain the court’s decision in favor of the Government.”<sup>98</sup> But there is simply no case law to support this. Further, the difference between granting a hiring party a license to practice what was developed for it and granting it ownership, in the absence of a contractual assignment, is too great a distinction to gloss over. At the same time, because the case for *contractors’* equitable title assignment failed to find support in the courts, so also the Law Monograph’s position that contractors’

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tractor agrees that ‘he has not entered into and will not enter into any arrangement or agreement’ which would affect his ability to grant to the Government the patent rights called for by the contract”).

93. *Id.* at 158.

94. *Id.* (“Where the contract is silent as to the rights of the Government in inventions made by the contractor or his employees in the course of performing a Government contract, and where no agreement as to the disposition of a resulting patent can be implied in fact, the courts will in all probability apply the rules applicable to the employer-employee relationship.”).

95. *Ordnance Eng’g Corp. v. United States*, 68 Ct. Cl. 301 (1929).

96. *Id.* at 353 (“We need not multiply the citation of authorities to sustain the rule that where one is employed by another for development and experimental work the result of the relationship is an implied license to the employer to use whatever invention develops from the experiment.”).

97. *Id.* (“As stated in defendant’s brief: ‘An employee employed to invent creates for his employer, and an equitable ownership of the employer in the employees creation will be enforced.’”).

98. 3 BIDDLE REPORT, *supra* note 3, at 159 (“[T]he court was plainly of the view that a Government contractor occupies the same position as a Government employee with respect to rights in an invention made at the Government’s expense and behest, and that if the Government is entitled to an assignment of an invention from an employee, it is likewise entitled to an assignment from a contractor under the same circumstances.”). The Law Monograph also discussed *McKinnon Chain Co. v. American Chain Co.*, 259 F. 873 (M.D. Pa. 1919), a case involving private parties for the same proposition. But that case likewise only granted a shop rights license. *Id.* at 878–89.

*employees* should be found to have equitably transferred title to the hiring party must also fail.<sup>99</sup>

These twin overstatements—that most universities require assignment of employee inventions and common law rules would transfer equitable title from contractors (and their employees) to the government—seem to have led the drafters of the Report to conclude that government patent policy need concern itself solely with allocation of title between the government and its contractors. This faulty conclusion became a fundamental premise upon which the entire edifice of government contracting and procurement policy (including Bayh-Dole) was built.<sup>100</sup> Besides being a problem in its own right, this mistaken premise largely disappeared from view, turning into an unstated assumption that resulted in significant confusion over how government patent policy with regard to contractors' employees was supposed to work.

In retrospect, it is easy to see how tempting it must have been for the drafters to jump to this faulty conclusion. First, private firms appear to have been the primary recipient of federal R&D funding in this period. So the arrangements they had with their employees would be the most important factor for government patent policy. Conveniently, private firms routinely secured assignments in advance. The speculation that contractors in university settings did the same would therefore be understandable, especially considering that the Biddle Report expressly referenced other private firm contracting principles—such as the established law of employee-invention title allocation—as a model for government policy.<sup>101</sup> Thus, the Report can be seen as a reasonable model for a government extramural R&D program focused on private firms (and nonprofit research organizations). However, the shift to universities as the locus of extramural research over the next decades resulted in a fatally flawed assumption just as the foundation of uniform government patent policy was being laid.

### B. *The Kennedy Patent Policy*

No comprehensive government-wide patent policy was promulgated throughout the 1950s. Instead, pieces of the Biddle Report's recommendations were implemented. In 1950, President Truman issued an executive order adopting the Report's recommended rules for government-employee

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99. This is, of course, distinct from the case-law-supported rules that employees who are hired to invent must assign title to the employer.

100. See, e.g., Joseph P. Allen & Howard W. Bremer, *It Ain't Necessarily So: Just Saying that Bayh-Dole Gives Patent Ownership to University Inventors Doesn't Make It True*, 6 LIFE SCI. L. INDUS. REP. 415, 416 (2012) ("It is well established that organizations can require their employees to assign patent rights for inventions made during the course of employment to them. Bayh-Dole is based on this premise.").

101. 1 BIDDLE REPORT, *supra* note 3, at 78.

invention rights.<sup>102</sup> Over the course of the decade and into the next, a number of statutes were passed that allocated title as between the government and its contractors.<sup>103</sup> Some of these were “vesting statutes” in which the normal rule of inventor ownership was modified to vest title in a government or government-related entity.<sup>104</sup> Meanwhile, various government agencies continued developing their own patent policies for extramural research.<sup>105</sup>

In 1963, the Kennedy administration attempted to establish a uniform, government-wide policy for extramural research (the “Kennedy Patent Policy”).<sup>106</sup> It set out nearly all the key concepts and terminology of the modern government R&D procurement and technology transfer system, with many of them adapted from the Biddle Report.<sup>107</sup> The Kennedy Patent Policy also included detailed requirements for contractors who acquired exclusive patent rights.<sup>108</sup> In cases where the federal agency retained the patent rights, the Kennedy Patent Policy imposed some conditions on the agency itself.<sup>109</sup> The

102. President Truman implemented the recommended shop rights and hired-to-invent rules for government employees in Executive Order 10096, which as amended is still in force. Providing for a Uniform Patent Policy for the Government with Respect to Inventions Made by Government Employees and for the Administration of Such Policy, Exec. Order No. 10096, 3 C.F.R. 292 (1949–53), *reprinted as amended in* 37 C.F.R. § 501 (2012). The policy was challenged as unconstitutional in the 1970s and 1980s but survived. *Heinemann v. United States*, 796 F.2d 451 (Fed. Cir. 1986) (finding the Truman Order constitutional based on Executive powers and Congressional acquiescence for many years); *Kaplan v. Corcoran*, 545 F.2d 1073 (7th Cir. 1976) (same).

103. Act of June 29, 1935, § 10(a), 49 Stat. 437 (codified as amended at 7 U.S.C. § 427i(a)); Act of Apr. 5, 1944, § 3, 58 Stat. 191 (codified at 30 U.S.C. § 323); Act of Aug. 14, 1946, § 205, 60 Stat. 1090 (codified at 7 U.S.C. § 1624(a)); National Science Foundation Act of 1950, § 12, 82 Stat. 360 (codified at 42 U.S.C. § 1871(a)); Atomic Energy Act of 1954, § 152, 68 Stat. 943 (codified at 42 U.S.C. § 2182); National Aeronautics and Space Act of 1958, § 305, Pub. L. No. 85-568, 72 Stat. 426 (codified at 42 U.S.C. § 2457); Coal Research Development Act of 1960, § 6, 74 Stat. 337 (codified at 30 U.S.C. § 666); Helium Act Amendments of 1960, § 4, 74 Stat. 920 (codified at 50 U.S.C. § 167b); Arms Control and Disarmament Act of 1961, § 32, 75 Stat. 634 (codified at 22 U.S.C. § 2572); Foreign Assistance Act of 1961, § 219, 83 Stat. 806 (codified at 22 U.S.C. § 2179).

104. *E.g.*, Atomic Energy Act of 1954, § 152, 68 Stat. 943 (codified at 42 U.S.C. § 2182) (providing that title to inventions in the field of atomic energy “shall be vested in, and be the property of, the [Atomic Energy] Commission”); *see* Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc., 131 S. Ct. 2188, 2195 (2011).

105. *See* Government Patent Policy: Memorandum for the Heads of Executive Departments and Agencies, 28 Fed. Reg. 10,943 (Oct. 12, 1963) [hereinafter “Kennedy Patent Policy”].

106. *See id.*

107. In particular, the core elements of the Government License and March-In Rights were in place. *Id.* § 1(b), 1(f)–(g).

108. *Id.* § 1(e)–(h). For example, the contractor would have to submit periodic written reports to the funding agency regarding progress on commercialization of the invention. *Id.* § 1(e).

109. For example, if the funding agency chose not to file for foreign patents, then the contractor would be able to file for that patent subject only to a non-exclusive license to the government for governmental purposes and on behalf of any foreign government that would get such rights under a treaty or agreement with the United States. *Id.* § 1(h).

key divergence of the Kennedy Patent Policy from the Biddle Report was that the former sought to establish a balance between government and contractor ownership of patents arising from federally funded research,<sup>110</sup> while the latter had advocated government ownership or public dedication. Under the Kennedy Patent Policy, funding agencies should consider whether inventions arising under federal funding agreements could be practiced directly by the public (e.g., a farming technique), or whether intervening R&D and private initiative was needed to commercialize the invention (e.g., a complex manufactured device).<sup>111</sup> The Kennedy Patent Policy seemed primarily focused on contractors in the private sector rather than contractors from universities and nonprofit research organizations. Contractors who retained title or exclusive rights under the Kennedy Patent Policy had to bring those inventions to “the point of practical application,” defined as “to manufacture in the case of a composition or product, to practice in the case of a process, or to operate in the case of a machine and under such conditions as to establish that the invention is being worked and that its benefits are reasonably accessible to the public.”<sup>112</sup>

Most importantly, the Kennedy Patent Policy addressed allocation of patent rights *only* between the government and its contractors. Because the Policy so closely tracked the Biddle Report, it can be inferred that it relied on the Report’s faulty conclusion that contractors would secure necessary assignments from employees. This was reasonable given the Kennedy Patent Policy’s focus on private firms. But this reliance cemented the transformation of a faulty conclusion into a premise, and later into an unstated assumption underlying all future government patent policy for extramural research. In the end, however, the Kennedy Patent Policy was never implemented in government-wide regulations, largely because of the myriad patent title allocation statutes Congress passed during this period.<sup>113</sup>

The Kennedy Patent Policy also commissioned the Harbridge House *Government Patent Policy Study* issued in 1968 (the “Harbridge House Report”).<sup>114</sup> While its overall findings were inconclusive, it generated specific findings that shaped the debates in the 1970s concerning government patent policy. First, it suggested that the NIH Medicinal Chemistry Program was hindering the commercialization of pharmaceutical compounds by discouraging R&D firms from participating in it due to the mandatory allocation of

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110. *Id.* at 10,943 (“[T]he public interest might also be served by according exclusive commercial rights to the contractor in situations where the contractor has an established non-governmental commercial position . . .”).

111. *Id.*

112. *See id.* §§ 1(f), 4(g).

113. *See supra* notes 103–104 and accompanying text.

114. HARBRIDGE HOUSE, GOVERNMENT PATENT POLICY STUDY, FINAL REPORT FOR THE FCST COMMITTEE ON GOVERNMENT PATENT POLICY (1968) [hereinafter “HARBRIDGE HOUSE REPORT”].

patent title to NIH. Second, the Harbridge House Report recommended different rules for ownership of federally funded inventions for universities and nonprofits on the one hand, and large private sector companies on the other. In doing so, it revealed the roots of confusion over where universities and nonprofits fit under the Kennedy Patent Policy by pointing to the language requiring an “established commercial position” for title to lie in the contractor.<sup>115</sup> It found that while large companies were likely to take on federal contract research work even if the government retained title, universities and nonprofits were not, because they could not directly commercialize the results through manufacture and distribution.<sup>116</sup>

Following the release of the Harbridge House Report—although not necessarily because of it—the NIH changed its patent policy and instituted a standard form “institutional patent agreement” (“IPA”) for funding agreements with universities that had an approved patent policy.<sup>117</sup> The IPA gave contractors the contractual right to elect to retain title. It also contained provisions beyond those required under the Kennedy Patent Policy, including: (i) a restriction against assignment of inventions to third parties except private or university-affiliated patent management organizations such as Research Corporation and the Wisconsin Alumni Research Foundation; (ii) a limitation on the term of exclusive licenses; (iii) a requirement for royalty income to be shared with inventors, with any remaining funds (after expenses) to be used for educational and research purposes; and (iv) a requirement that any patent application arising from the funding agreement contain a reference to the government support.<sup>118</sup> Crucially, the IPA also required contractors to obtain sufficient rights from its employees to protect the government’s interests: “The Institution shall obtain patent agreements to effectuate the provisions of this Agreement from all persons in its employ who perform any part of the work under any contract except nontechnical personnel, such as clerical and manual laborers.”<sup>119</sup> The NIH IPA, together with the later NSF IPA, would be explicitly acknowledged as the models for Bayh-Dole.<sup>120</sup>

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115. 4 HARBRIDGE HOUSE REPORT, *supra* note 114, at 93.

116. 1 HARBRIDGE HOUSE REPORT, *supra* note 114, at vi.

117. See John H. Raubitschek & Norman J. Latker, *Reasonable Pricing—A New Twist for March-in Rights Under the Bayh-Dole Act*, 22 SANTA CLARA COMPUTER & HIGH TECH. L.J. 149, 153 (2005). The origins of the IPA concept dates back to 1953. See *Gov’t Patent Policies: Institutional Patent Agreements: Hearings Before the S. Subcomm. on Monopoly & Anticompetitive Activities of the Select Comm. on Small Bus.*, 95th Cong. 15 (1978) (statement of Norman J. Latker, Patent Counsel, Dep’t of Health, Educ. & Welfare).

118. See Raubitschek & Latker, *supra* note 117, at 153 n.16.

119. *Gov’t Patent Policies: Institutional Patent Agreements: Hearings Before the S. Subcomm. on Monopoly & Anticompetitive Activities of the Select Comm. on Small Bus.*, 95th Cong. 1835 (1978) (minutes of meetings of interagency committees on revision of the draft of the Government-wide IPA).

120. See 126 CONG. REC. 8714, 8737–49 (1980).

### C. *The Nixon Patent Policy and GSA Regulations*

In 1971 the Nixon administration issued a modified and restated version of the Kennedy Patent Policy, which increased the opportunities for contractors to retain title or exclusive licenses (the “Nixon Patent Policy”).<sup>121</sup> Due to the patent title allocation statutes that hindered the Kennedy administration, the Nixon administration was likewise constrained in establishing a truly uniform patent policy for the government. Notwithstanding this, President Nixon ordered the General Services Administration (“GSA”) to promulgate implementing regulations for the Nixon Patent Policy.<sup>122</sup>

The GSA issued draft regulations in 1972,<sup>123</sup> and then promulgated an interim set of regulations in 1973.<sup>124</sup> The heart of the regulations was a long form<sup>125</sup> and short form<sup>126</sup> set of prescribed patent clauses to be included in funding agreements (the “Patent Rights Clauses”).<sup>127</sup> The long form was to be used with industry contractors and nonprofit contractors when development work was to be performed. The short form could be used for basic and applied research by nonprofit organizations. The long form had three variations for use: when the decision to allocate title was for the government,<sup>128</sup> for the contractor,<sup>129</sup> or to be deferred until actual inventions arose.<sup>130</sup> The short form had two variations for use: when the decision to allocate title was for the government<sup>131</sup> or was to be deferred until actual inventions arose.<sup>132</sup>

However, even where the government was to take title, the contractor could petition to retain greater rights than the default nonexclusive license (“Greater Rights Determinations”).<sup>133</sup> While a process was established for a contractor’s employee to request retention of greater rights in the event that the contractor did not seek them, with the contractor’s consent,<sup>134</sup> the regulations were clearly built upon the premise of employee ownership ab initio because the Patent Rights Clauses required the contractor to secure sufficient patent rights from employees to protect the government’s interests: “The Contractor shall obtain patent agreements to effectuate the provisions of this

121. Government Patent Policy: Memorandum for Heads of Executive Departments & Agencies, 36 Fed. Reg. 16,887 (Aug. 23, 1971).

122. *Id.* § 2.

123. Allocation of Rights in Inventions, 38 Fed. Reg. 23782, 23791 (Sept. 4, 1973).

124. *Id.*

125. *Id.* § 1-9.107-5.

126. *Id.* § 1-9.107-6.

127. This set of clauses had origins in both the IPAs and earlier practice of the Office of Scientific Research and Development from at least the 1940s. 1 BIDDLE REPORT, *supra* note 3, at 81–82.

128. Allocation of Rights in Inventions, 36 Fed. Reg. 16,887, at § 1-9.107-5(a).

129. *Id.* § 1-9.107-5(b).

130. *Id.* § 1-9.107-5(c).

131. *Id.* § 1-9.107-6(a).

132. *Id.* § 1-9.107-6(b).

133. *Id.* § 1-9.109-6.

134. *Id.*

clause from all persons in his employ who perform any part of the work under this contract except nontechnical personnel, such as clerical employees and manual laborers.”<sup>135</sup>

This backstop measure for employees to reacquire rights they had previously assigned to their employer in the event that neither the employer nor the government were going to commercialize the invention was the model for section 202(d) of Bayh-Dole.<sup>136</sup> The problem was that the petition process wound up in the statutory language of Bayh-Dole while the prior assignment requirement became buried in increasingly labyrinthine federal regulations. This seems to have led directly to the confusion at the heart of *Stanford v. Roche*: because the petition process seems to be the *only* way for inventors to retain title, Bayh-Dole must have allocated title to the contractor or government.<sup>137</sup> The fault lies of course with the mistaken assumption of assignments between contractors and their employees. The government need not worry about how contractors were securing title from employees. It could simply rely on them to do so. The Patent Rights Clauses were in place to remind university administrators of this obligation.

In 1974, in *Public Citizen v. Sampson*, Public Citizen and a collection of seventeen members of Congress challenged the regulations on the basis that the regulations’ authorization for federal agencies to grant title to contractors harmed the plaintiffs as taxpayers (improper use of federal funds and property), consumers (the contractors would have a monopoly position on federally funded inventions and charge higher than competitive prices to the public), and members of Congress (the regulations usurped their constitutional authority to determine the disposition of federal property).<sup>138</sup> This was an attempt to bolster the Biddle Report’s positions and revive dicta from cases such as *Squier* and *Houghton* that the government should own inventions it had funded. But those arguments had been rejected by the Supreme Court in *Dubilier* and by a decade of formal executive policy over three presidential administrations.

The *Public Citizen* court dismissed the case on motion of the defendant after finding that none of the plaintiffs had standing to sue GSA because they were not directly harmed by the regulations. While the court neither ruled on the propriety of the Nixon Patent Policy and the promulgated regulations, nor the merits of the plaintiffs’ arguments, it noted in dicta that Congress could act when it wanted to regulate the authority of federal agencies in the disposition of patents that were federal property.<sup>139</sup> The court declined, in dicta, to suggest that federally funded inventions were *necessarily* federal property. It did, however, state that if any such inventions *were* found to be

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135. *Id.* §§ 1-9.107-5(a)–(c), 1-9.107-6(a)–(b).

136. *See infra* Part III.

137. *See infra* Part IV.

138. *Public Citizen v. Sampson*, 379 F. Supp. 662 (D.C. Cir. 1974).

139. *Id.* at 667 (citing 42 U.S.C. §§ 2182, 2457 (1970)).



federal property, then the agencies would not have the authority to assign title in such patent property absent clear congressional authorization.<sup>140</sup>

Notwithstanding the efforts of GSA to implement the title allocation regulations and standard Patent Rights Clauses, in 1973 NSF developed and began using its own IPA, substantially similar to that of NIH.<sup>141</sup> Following the resolution of *Public Citizen*, GSA reissued a revised final version of the rules in 1975 (the “GSA Patent Policy Regulations”).<sup>142</sup> While there were many specific textual changes, the overall contours, terminology, and clauses of the GSA Patent Policy Regulations were quite similar to those of the Interim GSA Patent Policy Regulations. These regulations remained in place even after passage of Bayh-Dole, until final rulemaking was completed in 1987 incorporating the Reagan Patent Policy, Reagan Executive Order, and amendments to Bayh-Dole under the Trademark Clarification Act of 1984.<sup>143</sup> They provided critical “infrastructure” clauses and terms as well as the framework for understanding both the statutory provisions of Bayh-Dole and the regulations promulgated thereunder.

Thus, by the mid-1970s, intramural and extramural federal patent policies were fairly well developed. Federal employees generally had to assign inventions arising from their work. Contractor employees were also generally assigning their inventions to the contractor. Relying on these general contractor practices, the government did not dictate the terms of patent assignment agreements between contractors and their employees, but simply required that an assignment sufficient to guarantee the government’s rights must be in place.<sup>144</sup> At the same time, unless an IPA was in place, the invention title allocation as between the federal government and the contractor was subject to the determination procedures of the Nixon Patent Policy, as implemented in the GSA Patent Policy Regulations and standard Patent Rights Clauses incorporated into the particular funding agreement.

### III. BAYH-DOLE AND ITS IMPLEMENTING REGULATIONS

In 1976, the Commission on Government Procurement appears to have been the first government body to suggest a single patent ownership policy—there would be one set rule for determining whether title stayed with

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140. *Id.* (citing *Houghton v. United States*, 23 F.2d 386 (4th Cir. 1928)).

141. *See* Raubitschek & Latker, *supra* note 226, at 153.

142. Patents, Data & Copyrights: Allocation of Rights in Inventions, 40 Fed. Reg. 19,814 (May 7, 1975) (codified at 41 C.F.R. Part 1-9).

143. *See infra* Part III.

144. Patents, Data & Copyrights: Allocation of Rights in Inventions, 40 Fed. Reg. 19,814, at § 1-9.107-5 (“The Contractor shall obtain patent agreements to effectuate the provisions of this clause from all persons in his employ who perform any part of the work under this contract except nontechnical personnel, such as clerical workers and manual laborers.”); *id.* § 1-9.107-6 (“[T]he Contractor shall . . . obtain patent agreements to effectuate the provisions of this clause from all persons who perform any part of the work under this contract except nontechnical personnel, such as clerical employees and manual laborers.”).

the contractor or vested in the government.<sup>145</sup> The Federal Council for Science and Technology went further and drafted a bill.<sup>146</sup> Although this bill was not introduced into Congress, a similar bill was introduced in 1977.<sup>147</sup> However, no hearings were held on the bill and it languished without action.<sup>148</sup> The following year, GSA announced that it would incorporate a newly worded IPA in the Federal Procurement Regulations for government-wide use by any agency not prohibited from doing so by statute.<sup>149</sup> This was stayed while hearings on the nature and use of IPAs, including whether they were properly authorized under Federal statutory law and the Nixon Patent Policy, were held by the Senate Subcommittee on Monopoly and Anticompetitive Activities of the Select Committee on Small Business.<sup>150</sup>

The Carter administration subsequently backed a new uniform government patent policy<sup>151</sup> and was able to get a bill introduced to Congress in 1980.<sup>152</sup> It envisioned a system of exclusive licenses limited to specific fields of use that would be granted to federal contractors for inventions they developed under federal funding.<sup>153</sup> If the contractor failed to commercialize the invention within that field of use, then the government could terminate the relevant license.<sup>154</sup> At the same time, the bill supported the grant of title to contractors who were universities or small businesses in recognition of their “special place in our society.”<sup>155</sup>

This is where the confusion starts as to the “real” Bayh-Dole Act and its legislative history. The statutory provisions we know as Bayh-Dole today were ultimately signed into law as part of H.R. 6933, but this was *only after* the text of S. 414 (the Senate bill that had been earlier introduced in 1979 by Senators Birch Bayh and Robert Dole) was used to replace all of the relevant original text of H.R. 6933 in an amendment-by-substitution legislative pro-

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145. SUBCOMM. ON DOMESTIC & INT’L SCIENTIFIC PLANNING & ANALYSIS OF THE HOUSE COMM. ON SCI. & TECH., 94TH CONG., BACKGROUND MATERIALS ON GOV’T PATENT POLICIES: REP. OF COMMS., COMM’NS., AND MAJOR STUDIES 185, 195 (Comm. Print 1976).

146. FED. COUNCIL FOR SCI. & TECH., COMM. ON GOV’T PATENT POLICY, *Draft Bill Entitled “Federal Intellectual Property Policy Act of 1976,”* reprinted in 1976 FED. COUNCIL FOR SCI. & TECH., COMBINED REPORT ON GOV’T PATENT POLICY 82–119 app. D.

147. H.R. 6249, 95th Cong. (1977).

148. See *University and Small Business Patent Procedures Act: Hearings on S. 414 Before the S. Comm. on the Judiciary*, 96th Cong. 51 (1979).

149. Federal Procurement Regulations, 43 Fed. Reg. 4424 (Feb. 2, 1978).

150. *Gov’t Patent Policies: Institutional Patent Agreements, Hearings before the S. Subcomm. on Monopoly & Anticompetitive Activities of the Select Comm. on Small Business*, 95th Cong. 1–12 (1978).

151. *Industrial Innovation Initiatives: Message to Cong. on Admin. Actions & Proposals*, 2 PUB. PAPERS 2070, 2071 (Oct. 31, 1979).

152. Bill to Amend the Patent and Trademark Laws, H.R. 6933, 96th Cong. § 6 (as introduced in House, Mar. 26, 1980).

153. *Id.*

154. *Id.*

155. *Id.*

cedure.<sup>156</sup> Sections 1 through 5 of the original H.R. 6933 were various amendments to the patent and trademark laws relating to things such as reexamination proceedings and fees and funding for the U.S. Patent and Trademark Office (“USPTO”).<sup>157</sup> They had nothing to do with disposition of federally owned or funded inventions. Section 6 contained the bill’s provisions for a new Chapter 38 in Title 35 (Patents) of the U.S. Code that would codify “The Government Patent Policy Act of 1980.”<sup>158</sup>

S. 414—the actual statutory provisions that became the Bayh-Dole Act—had been introduced as the University and Small Business Patent Procedures Act on February 9, 1979 and referred to the Senate Committee on the Judiciary Committee.<sup>159</sup> S. 414 avoided many of the controversies plaguing other government patent policy bills by covering only nonprofit, university, and small business contractors. The retention of federally funded patent rights by large business federal contractors had been a lightning rod for commentators concerned with unjust windfalls and monopolies for such businesses. The provisions of S. 414 clearly derived from the Nixon Patent Policy, the GSA Patent Policy Regulations, and IPAs, but with some slightly different language in parts, and were to be codified as a new Chapter 18 in Title 35 (Patents) of the U.S. Code.<sup>160</sup>

The Senate Committee on the Judiciary held hearings on S. 414 in late 1979 and issued a report—Senate Report No. 96-480—which is the *only* published congressional report that comments on the actual language of Bayh-Dole.<sup>161</sup> The bill was reintroduced and after some debate the Senate passed S. 414 on April 23, 1980.<sup>162</sup> The bill was defeated, however, after being introduced as H.R. 2414 in the House of Representatives. Instead, the House passed the Carter administration’s favored H.R. 6933 bill on November 17, 1980, which then advanced to the Senate. The Senate amended H.R. 6933 by substituting in the entirety the provisions of its own S. 414 for all of

156. See H.R. 6933, Amendment SU 1779, 96th Cong. (Nov. 20, 1980) (proposed by Senator Dole and agreed to by a Senate voice vote).

157. H.R. 6933, 96th Cong. §§ 1–5 (as introduced in House, Mar. 26, 1980).

158. *Id.* § 6.

159. University and Small Business Patent Procedures Act, S. 414, 96th Cong. (as introduced in Senate, Feb. 9, 1979).

160. *Id.*

161. S. REP. NO. 96-480 (1979). Hearings and reports for H.R. 6933 and any other bills in Congress during the years 1978-1980 are directed to substantially different bills that did not have the provisions of S. 414 (Bayh-Dole). Some commentators have inaccurately relied on congressional reports or debates that were directed to the original H.R. 6933, when discussing Bayh-Dole. See, e.g., Birch Bayh & Robert Dole, *Our Law Helps Patients Get New Drugs Sooner*, WASH. POST, Apr. 11, 2002, at A28; Sen. Birch Bayh, Statement to Nat’l Inst. Of Health (May 25, 2004), in NAT’L INST. OF HEALTH, PUBLIC MEETING ON NORVIR/RITONAVIR MARCH-IN REQUEST (2004), available at <http://ott.cit.nih.gov/sites/default/files/documents/pdfs/2004NorvirMtg.pdf>.

162. 126 CONG. REC. 8731, 8737–49 (1980).

section 6 in H.R. 6933 (leaving sections 1–5 intact),<sup>163</sup> passed the bill on November 20, 1980, and then returned the amended H.R. 6933 to the House.<sup>164</sup> Thus, only debate occurring in the Senate on H.R. 6933 *after* the provisions of S. 414 were added to the bill in the amendment-by-substitution process should be considered as congressional views on the actual text of Bayh-Dole. Due to the pressing nature of the provisions of sections 1–5 of H.R. 6933, the House essentially capitulated on the battle over the content of section 6 and passed the Senate’s amended version with little discussion, and with no further amendments, the next day.<sup>165</sup> The House viewed the Senate’s section 6 (Bayh-Dole) as incomplete because members of the House had wanted to pass a truly uniform government patent policy that would cover all contractors, not just small businesses and universities.<sup>166</sup> However, the House contented itself with resolving to revisit the issue in the next Congress.<sup>167</sup>

The bill was signed into law as simply “An Act to Amend the Patent and Trademark Laws” on December 12, 1980.<sup>168</sup> Section 6 of H.R. 6933 then became what is today referred to as the Bayh-Dole Act. The Bayh-Dole Act created 35 U.S.C. § 200 to set out its purpose.<sup>169</sup> Section 201 set out definitions that in all cases mapped directly from definitions found in the Kennedy Patent Policy, Nixon Patent Policy, or GSA Patent Policy Regulations.<sup>170</sup> Section 202 set out the basic right of contractors to elect to take title, and the conditions attendant thereto.<sup>171</sup> This section included the Government License, disclosure, and utilization reporting requirements that all also tracked the existing Executive Branch policies and regulations. Section 203 established the March-in Rights provisions, again taken directly from existing Executive Branch policies.<sup>172</sup> Section 204 set out the preference for U.S.

163. H.R. 6933, Amendment SU 1779, 96th Cong. (Nov. 20, 1980) (proposed by Senator Dole and agreed to by Voice Vote of Senate). Section 6 retained the codification at Chapter 38, but now had the title “Patent Rights in Inventions Made With Federal Assistance.”

164. 126 CONG. REC. 30360–66 (1980).

165. 126 CONG. REC. 30556–60 (Nov. 21, 1980). Representative Kastenmeier’s comments on introducing and urging passage of the Senate amendments to H.R. 6933 are illuminating for context: “[T]he bill we passed on Monday . . . is intact except for section 6. . . . In essence, the Senate deleted that section. I regret that action, but nonetheless it is a fact, and the outlook is virtually nonexistent for anything we can do in that regard . . . . Under the circumstances, I would say . . . that we will have to wait until next year to pursue again the uniform patent policy section, and I would join . . . in doing that. But in the meantime, rather than hold hostage these noncontroversial areas, I think we have no real option but to move forward with this and send it to the White House.” *Id.* at 30560.

166. *Id.*

167. *Id.*

168. An Act to Amend the Patent and Trademark Laws, Pub. L. No. 96-517, § 6, 94 Stat. 3015 (1980).

169. *Id.* § 6(a)(200).

170. *Id.* § 6(a)(201).

171. *Id.* § 6(a)(202).

172. *Id.* § 6(a)(203).

industry that contractors should exercise when licensing subject inventions for commercialization.<sup>173</sup> This provision underscored the understanding that contractors affected by Bayh-Dole would generally be licensing out their subject inventions, not directly practicing them. Section 205 provided for confidential treatment of information and data obtained from contractors pursuant to invention disclosures (confidential treatment for utilization reports was established in section 202).<sup>174</sup> Section 206 authorized the Office of Federal Procurement Policy (“OFPP”) to promulgate regulations implementing sections 202–204.<sup>175</sup>

The next few sections applied to *federally owned* rather than *federally funded* inventions.<sup>176</sup> But section 210 provided one of the key breakthroughs of Bayh-Dole: it superseded the myriad title allocation that Congress had passed over the years in the case of nonprofit, university, and small business contractors operating under funding agreements controlled by Bayh-Dole.<sup>177</sup> Had even this one statutory provision been in place for the Kennedy or Nixon administrations, government patent policy and technology transfer might have developed far more effectively in the pre-Bayh-Dole decades. Section 210 also made it clear that the bill did *not* supersede these title allocation rules for any other contractors. It then ratified and authorized the title allocation rules—both extant and in the future—under the Nixon Patent Policy or any successor policy for such contractors. Finally, section 211 expressly disclaimed any immunity from the antitrust laws for contractors by virtue of the bill’s provisions.<sup>178</sup>

Bayh-Dole’s provisions became effective on July 1, 1981, with the OFPP authorized to promulgate implementing regulations at any time after receipt of recommendations from the Office of Science and Technology Policy (“OSTP”). As a sub-agency of the Office of Management and Budget (“OMB”), OFPP issued interim final regulations as OMB Bulletin 81-22 on June 30, 1981.<sup>179</sup> The regulations became effective July 1, 1981—to match up with Bayh-Dole’s effective date—and were to expire on December 31, 1981, when replaced by a final OMB Circular.

Substantively, Bulletin 81-22 followed the same terminology and essential concepts of the Nixon Patent Policy and GSA Patent Policy Regulations, except of course as limited to the “retention by the contractor” long form

173. *Id.* § 6(a)(204).

174. *Id.* § 6(a)(205).

175. *Id.* § 6(a)(206).

176. Section 207 authorized federal agencies to patent and license their federally owned inventions. *Id.* § 6(a)(207). Section 208 authorized GSA to promulgate rules governing the licensing of federally owned inventions. *Id.* § 6(a)(208). Section 209 established restrictions on the licensing of federally owned inventions. *Id.* § 6(a)(209).

177. *Id.* at § 6(a)(210).

178. *Id.* at § 6(a)(211).

179. Patents; Small Business Firms & Non-Profit Organizations, 46 Fed. Reg. 34,776 (July 2, 1981).

version of the Patent Rights Clauses in the GSA Patent Policy Regulations. However, the version of the Patent Rights Clauses in Bulletin 81-22 used a substantively different “practical application” definition that focused on having the benefits of the subject invention “available to the public on reasonable terms.” This was in contrast to the definition in the GSA Patent Policy Regulations, which focused on having the benefits of the subject invention “reasonably accessible to the public.” However, as discussed above, this was likely because the core provisions of Bayh-Dole were limited to nonprofit organizations and small businesses which would generally be expected to license out their inventions for widespread commercialization rather than commercialize the inventions themselves. Accordingly, Bayh-Dole and its regulatory implementation appear to have simply adopted a modified version of the licensing oriented phrase “available for licensing royalty free or on terms that are reasonable in the circumstances” that originated in the Kennedy Patent Policy and had remained in continuous use since then to signify the licensing restriction.

The continuity of other requirements from the GSA Patent Policy Regulations to Bulletin 81-22 that were not actually required under Bayh-Dole belies the conservative nature of the federal patent policy process at the regulatory level. For example, Bayh-Dole as enacted only required that contractors disclose a subject invention “within a reasonable time after it is made,” while Bulletin 81-22 required contractors to disclose a subject invention within six months after the contractor’s personnel in charge of patent matters were notified by the inventors about the subject invention. This time restriction followed directly from the same time restriction in the GSA Patent Policy Regulations, albeit with a modified trigger.<sup>180</sup>

Other time requirements in Bulletin 81-22 were changed from those contained in the GSA Patent Policy Regulations. However, few if any of these changes appear to have been drafted specifically because of the language or intent of Bayh-Dole. Rather, they seem to be simply further steps in the continuing evolution of the government’s patent policy, and thus represented a tightening up of certain requirements based on new experiences. For example, in the GSA Patent Policy Regulations, contractors had to elect to retain title to subject inventions (in cases where the federal agency had used the “retention by contractor” patent clause in the funding agreement) at the time of disclosing the subject invention to the funding agency. But in Bulletin 81-22, contractors could wait up to twelve months to elect to retain title from the date that their patent administrators learned of the invention,

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180. In the GSA Patent Policy Regulations, the trigger was the conception or actual reduction to practice of the subject invention. Whereas in Bulletin 81-22, it was the date of notification of the conception or actual reduction to practice from the inventors to the contractor’s patent administrators.

whereas they had to disclose the subject invention to the funding agency within six months of that date.

Bulletin 81-22's sunset date was extended twice: first to January 31, 1982,<sup>181</sup> and then to February 28, 1982.<sup>182</sup> The final OMB rule, OMB Circular A-124, implemented Bayh-Dole as enacted, and was published on February 19, 1982. It became effective March 1 that year.<sup>183</sup> While many comments had been received by OFPP during the rulemaking process, Circular A-124 was substantially the same as Bulletin 81-22.

Despite Congress's sidestepping of the large business contractor issue in Bayh-Dole, there was still a desire in some parts of the government to extend the default rule for contractor title elections to large businesses. At the same time, the clarity of Bayh-Dole's one-size-fits-all rule was muddled by the uncertainty as to which companies would be deemed too large to fall within the Act's ambit. Accordingly, in 1983, President Reagan replaced the Nixon Patent Policy with his own that adopted the rules and policies of Bayh-Dole to become the new federal patent policy covering all contractors who fell outside of the scope of Bayh-Dole (the "Reagan Patent Policy").<sup>184</sup> This essentially unified federal patent policy across *all* federal contractors, subject to some technical distinctions.

The following year, Congress amended Bayh-Dole as part of the Trademark Clarification Act of 1984.<sup>185</sup> One amendment, in particular, has been controversial. Section 210(c) was modified to acknowledge the new Reagan Patent Policy and to require that the Executive Branch policy, which was promulgated for federal contractors and was not directly covered by Bayh-Dole, impose at a minimum the Government License and March-In Rights through funding agreements.<sup>186</sup> By contrast, the Reagan Patent Policy had permitted agencies to use their discretion to waive any Bayh-Dole provisions, where necessary to secure contractor participation and commercialization of any resultant subject inventions. While the amendment of section 210(c) may appear to have been an "endorsement" or "authorization" of the Reagan Patent Policy by Congress that effectively extended Bayh-Dole to cover large businesses, such an interpretation is not directly supported by the legislative history. Instead, the section likely maintained its earlier purpose to authorize the executive to make policy for contractors not directly covered

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181. 47 Fed. Reg. 117 (Jan. 4, 1982).

182. 47 Fed. Reg. 4628 (Feb. 1, 1982).

183. 47 Fed. Reg. 7556 (Feb. 19, 1982).

184. Memorandum to the Heads of Exec. Dep'ts & Agencies, 19 WEEKLY COMP. PRES. DOC. 252 (Feb. 18, 1983).

185. Trademark Clarification Act of 1984, Pub. L. No. 98-620, 98 Stat. 3335. There were also minor amendments to Bayh-Dole in 1982. See Pub. L. No. 97-256, tit. I, §§ 101(5)-(6), 102, 96 Stat. 816 (1982).

186. See S. REP. NO. 98-662, at 5808 (1984).

by Bayh-Dole. The new twist, however, was that such policy had to include a version of the Government License and March-in Rights.

The Trademark Clarification Act of 1984 also amended Bayh-Dole to substitute the Department of Commerce (“DoC”) for OFPP for rulemaking authority.<sup>187</sup> DoC began a rulemaking process in 1985 to implement all of the 1984 amendments in a new Chapter IV in Title 37 of the Code of Federal Regulations (“CFR”) consisting of a new part 401.<sup>188</sup> The proposed rules closely followed Circular A-124 with changes primarily to effect the statutory amendments. The next year, DoC issued an Interim Final Rule that included further minor modifications based on public and agency comments on the proposed rule.<sup>189</sup> Then on March 18, 1987, DoC published the final rule implementing Bayh-Dole as amended (the “Bayh-Dole Regulations”), to become effective on April 17, 1987.<sup>190</sup> This contained only minor revisions as well. In some ways, then, Bayh-Dole only became fully implemented in 1987, after all of the issues raised by the Reagan Patent Policy and 1984 amendments were finalized and implemented through rule making.

Following a matter of days after the effective date of the Bayh-Dole Regulations, President Reagan issued Executive Order 12591, “Facilitating Access to Science and Technology” (“1987 Reagan Executive Order”).<sup>191</sup> This Executive Order conformed Executive Branch technology and patent policy to both the recently enacted Federal Technology Transfer Act<sup>192</sup> and Bayh-Dole amendments in the Trademark Clarification Act of 1984. It also incorporated the Bayh-Dole Regulations as references for patent allocation under the Federal Acquisition Regulations for large businesses not directly covered by Bayh-Dole.<sup>193</sup>

The interim rulemakings and Bayh-Dole Regulations broadly tracked the earlier GSA regulations, creating a chain of continuity in the basic administration and content of the federal R&D procurement system, even for provisions not expressly required by Bayh-Dole, and including the mandatory standard Patent Rights Clauses. Within the latter, the Bayh-Dole

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187. Trademark Clarification Act of 1984, § 501(4), Pub. L. No. 98-620, 98 Stat. 3335 (1984).

188. Rights to Inventions Made by Nonprofit Organizations & Small Business Firms, 50 Fed. Reg. 13524 (Apr. 4, 1985).

189. Rights to Inventions Made by Nonprofit Organizations & Small Business Firms, 51 Fed. Reg. 25508 (July 14, 1986).

190. Rights to Inventions Made by Nonprofit Organizations & Small Business Firms, 52 Fed. Reg. 8552 (Mar. 18, 1987).

191. Facilitating Access to Science & Technology, Exec. Order No. 12591, 52 Fed. Reg. 13414 (Apr. 22, 1987).

192. Federal Technology Transfer Act of 1986, Pub. L. No. 99-502, § 9(c), 100 Stat. 1785.

193. The implementing rules for the Reagan Patent Policy continue to be codified in FAR Subpart 27.3. The switch from the Federal Procurement Regulation system (“FPR”) to the Federal Acquisition Regulation system (“FAR”) was effected in 1983. *See* Final Rule, Establishing the Federal Acquisition Regulation, 48 Fed. Reg. 42102 (Sept. 19, 1983).



Regulations also continued a modified version of the Final GSA Regulations' explicit requirement for contractors to secure patent rights from employee-inventors: "The *contractor* agrees to require, by written agreement, its employees, other than clerical and nontechnical employees . . . to execute all papers necessary to file patent applications on subject inventions *and* to establish the government's rights in the subject inventions."<sup>194</sup>

Both prongs of this contractual requirement would be unnecessary if Bayh-Dole automatically vested title to the invention in the contractor by operation of law. The contractor would not even have to obtain the assent or participation of the inventor, as it could file the patent application under the "hostile inventor" provision of the Patent Act.<sup>195</sup> Even if the first prong were read simply as a means to smooth the path for perfecting and recording title assignment with the USPTO, this would not explain the presence of the second prong. Written agreements with employee-inventors to protect the government's rights in such inventions would be entirely superfluous if Bayh-Dole vested title in the contractor by operation of law. Accordingly, even where there is a reference in Senate Report 96-480 that mentions the Act "automatically" granting title to small businesses and nonprofits,<sup>196</sup> this comment was actually directed to the fact that the Act was intended to change the existing *ex post* determination of title allocation as between contractor and federal agency into an *ex ante* system in which the allocation was predetermined under the funding agreement (and hence was "automatic").

Between 1984 and 2000, only minor conforming and typographical correction amendments were made to Bayh-Dole.<sup>197</sup> In 2000, substantive changes were made to Bayh-Dole primarily in sections dealing with federally owned inventions.<sup>198</sup> However section 200, "Policy and objective," was also amended to change a key clause from "to ensure that inventions made by nonprofit organizations and small business firms are used in a manner to promote free competition and enterprise;" to "to ensure that inventions made by nonprofit organizations and small business firms are used in a manner to promote free competition and enterprise without unduly encumbering future

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194. 37 C.F.R. §§ 401.14(a), (f)(2) (2012) (second emphasis added).

195. "Whenever an inventor refuses to execute an application for patent, or cannot be found or reached after diligent effort, a person to whom the inventor has assigned or agreed in writing to assign the invention or who otherwise shows sufficient proprietary interest in the matter justifying such action, may make application for patent on behalf of and as agent for the inventor on proof of the pertinent facts and a showing that such action is necessary to preserve the rights of the parties or to prevent irreparable damage . . ." 35 U.S.C. § 118 (2011).

196. S. REP. NO. 96-480, at 36 (1979).

197. See Pub. L. No. 99-514, 100 Stat. 2085 (1986); Pub. L. No. 102-204, 105 Stat. 1636 (1991); Pub. L. No. 102-572, 106 Stat. 4506 (1992); Pub. L. No. 103-272, 108 Stat. 745 (1994); Pub. L. No. 104-113, 110 Stat. 775 (1996); Pub. L. No. 105-393, 112 Stat. 3596 (1998); and Pub. L. No. 106-113, 113 Stat. 1501 (1999).

198. Pub. L. No. 106-404, 114 Stat. 1742 (2000).

research and discovery.”<sup>199</sup> No other substantive changes have been made to date.<sup>200</sup>

#### IV. RESOLVING THE QUESTION OF CONTRACTOR TITLE TO EMPLOYEE INVENTIONS

Long after the Biddle Report had faded from view, and after decades of having the question of assignments between contractors and employees buried in bureaucratic regulations, the mistaken assumption of universal assignments burst back into view in the 1990s and 2000s. Possibly in part because nothing in the Patent Rights Clauses expressly requires the contractor to have a full patent assignment agreement in place with all inventive employees, some universities began assuming that Bayh-Dole obligated a contractor’s employees to assign subject inventions by act of law so long as the university timely elected to retain title.<sup>201</sup> Some universities developed practices whereby they only bound their inventor employees to agree to assign inventions when they arose and upon request of the university.<sup>202</sup> In some cases this was done in a specific employment agreement, offer letter, or separate patent assignment agreement.<sup>203</sup> In other cases it was done through faculty handbooks or other official statements of policy.<sup>204</sup>

However, neither of these paths secure the assignment of inventions to the university at the time of execution of the agreement, date of hire, or date of issuance of the policy, as applicable. At most, they secure a contractual obligation for the inventor to assign the invention at some later date, as a kind of call option. But some universities and nonprofit organizations also sought to exercise their “statutory right” under Bayh-Dole to take title from employees even where no express agreement was in place with the employee by electing title to the invention with the funding agency.<sup>205</sup>

Even before *Stanford v. Roche*, this interpretation had been rejected by federal district courts. In *Gen-Probe, Inc. v. Center for Neurologic Study*, the Center raised counterclaims based on Dr. David Kohne’s work as a principal

199. *Id.*

200. In 2002, typographic formatting errors in Sections 202 and 203 were fixed and statutory citation conforming amendments for Sections 201, 209, and 210 were made. Pub. L. No. 107-273 (2002). And finally, in 2005 the last Bayh-Dole amendment to date was another statutory citation conforming amendments for section 210. Pub. L. No. 109-58, 119 Stat. 594 (2005).

201. *See* Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc., 131 S. Ct. 2188 (2011).

202. *See e.g.*, Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc., 583 F.3d 832 (Fed. Cir. 2009), *aff’d*, 131 S. Ct. 2188 (2011); *Univ. of Pittsburgh v. Townsend*, No. 3:04-cv-291, 2007 WL 2263079, at \*1 (E.D. Tenn. 2007), *aff’d on other grounds*, 542 F.3d 513 (6th Cir. 2008).

203. *See, e.g.*, *Stanford*, 583 F.3d at 837.

204. *See, e.g.*, *Univ. of Pittsburgh*, 2007 WL 2263079, at \*1.

205. *See, e.g., id.*; *Gen-Probe, Inc. v. Ctr. for Neurologic Study*, 853 F. Supp. 1215 (S.D. Cal. 1993).

investigator for grants the Center had received from federal agencies.<sup>206</sup> In particular, the Center alleged that Kohne had conceived subject inventions under the grants and had then refused to assign them to the Center, even after the Center timely elected title with the funding agency.<sup>207</sup> The Center sought assignment of the inventions. However, the court found that Kohne was not a party to the funding agreements—his listing as principal investigator did not make him a party—and that there was apparently no agreement between him and the Center.<sup>208</sup> Further, the court cited the Patent Rights Clause in the Final Bayh-Dole Regulations to support the proposition that “[i]f Dr. Kohne, and employees like him, were automatically parties to federal funding agreements, that requirement [of written agreements] would be superfluous.”<sup>209</sup>

In *University of Pittsburgh v. Townsend*, the University of Pittsburgh (“Pitt”) alleged that David Townsend and others had subverted and misappropriated Pitt’s rights to certain patents.<sup>210</sup> Pitt relied on its Faculty Handbook and other policies that purported to effect an assignment obligation on faculty researchers.<sup>211</sup> However, by its own terms, the policy was not to be relied on by faculty as Pitt’s definitive policies.<sup>212</sup> Townsend had made Pitt aware of his outside consulting with a private firm.<sup>213</sup> After working on two NIH grants while at Pitt, Townsend disclosed his inventions on the appropriate Pitt form, but did not include an assignment.<sup>214</sup> Pitt’s technology transfer personnel processed the disclosure but never followed up with Townsend for the assignment.<sup>215</sup> Pitt entered into a collaboration agreement with Townsend’s outside consulting firm.<sup>216</sup> Meanwhile, Townsend pursued a patent application on his invention with his consulting firm listed as assignee.<sup>217</sup>

As one of its arguments in litigation, Pitt asserted that Bayh-Dole operated to assign title from Townsend to Pitt once the latter elected to take title with the funding agency.<sup>218</sup> It cited the district court opinion in *Stanford v. Roche* which found that Bayh-Dole had indeed vested title in Stanford.<sup>219</sup> But the *Townsend* court found this unpersuasive as the Stanford researcher had already executed at least an express agreement to assign his invention to

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206. *Gen-Probe*, 853 F. Supp. at 1217.

207. *Id.* at 1218.

208. *Id.* at 1218–19.

209. *Id.* at 1219.

210. *Univ. of Pittsburgh*, 2007 WL 2263079, at \*1.

211. *Id.* at \*2–3.

212. *Id.* at \*4.

213. *Id.*

214. *Id.* at \*8.

215. *Id.* at \*8–9.

216. *Id.* at \*9.

217. *Id.* at \*10–11.

218. *Id.* at \*20.

219. *Id.* (citing *Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc.*, 487 F. Supp. 2d 1099, 1115, 1119 (N.D. Cal. 2007)).

Stanford before executing the assignment agreement with Roche's predecessor, Cetus.<sup>220</sup> Further, Pitt had full knowledge of Townsend's inventions and work with his consulting firm, and still failed to secure any kind of assignment agreement from him.<sup>221</sup>

In the reverse direction, John Fenn, a Nobel laureate researcher at Yale University, tried to invoke section 202(d) of Bayh-Dole to claim that it trumped any contractual arrangements between inventors and their employers because only the federal funding agency has the authority to decide disputed ownership of subject inventions.<sup>222</sup> The District Court for the District of Connecticut found that Fenn's attempts to portray Yale as having made a decision to allow him to retain title to his invention in correspondence with the NIH were unsuccessful because Yale officials had already elected to retain title.<sup>223</sup> It also found that Bayh-Dole did not preempt state law contractual rights in this matter.<sup>224</sup>

Finally, in *Stanford v. Roche*, the Supreme Court squarely rejected an interpretation of Bayh-Dole as a vesting statute that would assign title to contractors from their employees by act of law.<sup>225</sup> Dr. Mark Holodniy became a research fellow at Stanford University in 1988.<sup>226</sup> He executed Stanford's then standard Copyright and Patent Agreement ("CPA") which provided that he "agree[d] to assign" to Stanford his "right, title, and interest in" inventions resulting from his employment" at Stanford.<sup>227</sup> His work required him to learn and use the polymerase chain reaction technique ("PCR") that Cetus Corporation had pioneered and his supervisor arranged for him to learn. Upon arriving at Cetus, Holodniy executed Cetus' Visitor's Confidentiality Agreement ("VCA"), which provided that he "will assign and do[es] hereby assign" to Cetus his "right, title and interest in each of the ideas, inventions and improvements" made "as a consequence of [his] access" to Cetus."<sup>228</sup>

After nine months, during which the invention at the heart of this case was conceived, Holodniy returned to Stanford to test and refine the invention. He worked with colleagues there, allegedly with federal funding.<sup>229</sup> In 1991, Roche purchased all of Cetus' PCR-related assets. Over the next few

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220. *Id.*

221. *Id.*

222. *Fenn v. Yale Univ.*, 393 F. Supp. 2d 133, 140–41 (D. Conn. 2004).

223. *Id.* at 139.

224. *Id.* at 140–42.

225. *Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc.*, 131 S. Ct. 2188 (2011).

226. *Id.* at 2192; *see also* *Bd. of Trs. of the Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc.*, 583 F.3d 832, 837 (Fed. Cir. 2009).

227. *Stanford*, 131 S. Ct. at 2192.

228. *Id.*

229. *Id.* at 2192; *Stanford*, 583 F.3d at 838. Stanford was never able to produce the government funding agreement.

years it developed and distributed commercial kits worldwide based in part on Holodniy's work at Cetus.<sup>230</sup> In 1992, Holodniy and his Stanford colleagues finished testing and refining the invention. Stanford then obtained invention assignments from them and filed patent applications on the technique.<sup>231</sup> Three patents ultimately issued.<sup>232</sup> In 2000, Stanford approached Roche about taking a license to the Holodniy patents, but Roche declined after responding that it was a co-owner or licensee of the inventions based upon the terms of the VCA, some materials transfer agreements, and under common law shop rights.<sup>233</sup> Stanford sued Roche for patent infringement in 2005.<sup>234</sup>

The district court erroneously resolved the case largely in Stanford's favor by relying on the provisions of Bayh-Dole to transfer title by operation of law.<sup>235</sup> It also did not mention the first-in-time CPA, and instead treated an earlier materials transfer agreement and the VCA as the governing contracts.<sup>236</sup> The court found that the invention had been conceived by Holodniy while he was working at Cetus, and that, based on the terms of the VCA, he had preassigned his rights in it to Cetus.<sup>237</sup> Notwithstanding this assignment, once Holodniy returned to Stanford, his work to reduce it to practice under federal funding triggered the provisions of Bayh-Dole.<sup>238</sup> Under the court's interpretation of Bayh-Dole's section 202(d), the government has a "first right of refusal" to subject inventions (which include inventions first conceived or actually reduced to practice under federal funding), the contractor has a "second right of refusal," and then the inventor has only the remaining residual rights to petition for title.<sup>239</sup> Because Stanford timely elected to take title, the court concluded that the statutory provisions of Bayh-Dole superseded Roche first-in-time contractual assignment rights.<sup>240</sup>

The Federal Circuit reversed the district court's Bayh-Dole holding by rejecting the district court's "right of second refusal" theory for contractors.<sup>241</sup> It also discussed the role of the CPA, which Stanford now seemed to be relying on as an alternate avenue to cut off the effectiveness of the VCA.<sup>242</sup> The court distinguished present assignments of expectant interests

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230. *Stanford*, 131 S. Ct. at 2192.

231. *Id.* at 2192; *Stanford*, 583 F.3d at 838.

232. *Stanford*, 131 S. Ct. at 2192; *Stanford*, 583 F.3d at 838.

233. *Stanford*, 583 F.3d at 838.

234. *Stanford*, 131 S. Ct. at 2193.

235. *See Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc.*, 487 F. Supp. 2d 1099, 1117–19 (N.D. Cal. 2007).

236. *Id.* at 1115–17, 1120–23.

237. *Id.* at 1115–17.

238. *Id.* at 1117–19.

239. *Id.*

240. *Id.*

241. *Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc.*, 583 F.3d 832, 844 (Fed. Cir. 2009).

242. *Id.* at 841–42.

from mere promises to assign rights to the expectant interests in the future.<sup>243</sup> Relying on its precedents, the court asserted that present assignment of expectant interests—rights to property that do not yet exist—are valid, but establish only equitable title until the invention is actually made and a patent application filed.<sup>244</sup> However, immediately upon the filing of a patent application, legal title to the patent rights vest in the assignee with no further action required.<sup>245</sup>

Such present assignments of expectant interests must be distinguished from mere promises to assign rights in the future.<sup>246</sup> The latter are often used when the prospective assignee does not know in advance whether it wants title to the future invention and thus instead establishes what is essentially a call option. The two forms can both be contractual, but the present assignment is established by language such as “hereby assign,” whereas the promise to assign is established by a phrase such as “agree to assign.”<sup>247</sup> In contrast to the present assignment of expectant interests, when a promise to assign is made, and a patent application is later filed, no transfer of title occurs until and unless the option is called.<sup>248</sup> In the meantime, the inventor may legally assign any of her rights to third parties.<sup>249</sup> Of course, if and when the holder of the call option calls it in, then the assignor will not be able to honor that option and convey the invention rights (unless she can reacquire them from the current assignee). At this point, she would be in breach of her option agreement. But the counterparty to that agreement would only be able to sue for contract damages and not for an equitable remedy that would require conveyance of the inventions rights.

After establishing superior equitable title in Roche, the Federal Circuit then proceeded to reject the lower court’s interpretation of Bayh-Dole. It found that the district court had misinterpreted a Federal Circuit precedent which ruled that some violations of Bayh-Dole could allow the government to void title held by contractors or their employees.<sup>250</sup> However, such violations did not void title *ab initio* and thus the government would have to act to void title.<sup>251</sup> Most importantly, the Federal Circuit overturned the district court’s ruling and disputed Stanford’s position that the inventor residual title scheme set out in section 202(d) was the *only* way for inventors to hold title:

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243. *Id.*

244. *Id.*

245. *Id.*

246. *Id.*

247. *Id.*

248. *Id.* at 841.

249. *Id.* at 842.

250. *Id.* at 844.

251. *Id.* By contrast, the district court had held that such actions were automatically void. *Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc.*, 487 F. Supp. 2d 1099, 1118–19 (N.D. Cal. 2007).

Stanford identifies no authorities or reasons why its election of title under Bayh–Dole had the power to void any prior, otherwise valid assignments of patent rights. Stanford was entitled to claim whatever rights were still available after the Government declined to exercise its option, including the rights of co-inventors Merigan, Katzenstein, and Kozal. However, Holodny transferred his rights to Cetus more than six years before Stanford formally notified the Government of its election of title. As previously noted, Stanford’s invention rights policy “allow[ed] all rights to remain with the inventor if possible,” . . . which supports the conclusion that Holodny still possessed rights at the time he signed the VCA with Cetus. Just as we explained that Bayh–Dole does not automatically void *ab initio* the inventors’ rights in government-funded inventions, . . . we see no reason why the Act voids prior contractual transfers of rights.<sup>252</sup>

The Federal Circuit cited *Townsend* with approval for its proposition that later elections of title under Bayh–Dole by a university do not void earlier valid assignments from the inventor to a third party.<sup>253</sup> It then adopted the *Fenn* court’s interpretation that “the primary purpose of the Bayh–Dole Act is to regulate relationships of small business and nonprofit grantees with the Government, not between grantees and the inventors who work for them.”<sup>254</sup>

Thus, the Federal Circuit laid bare the incorrect reading of Bayh–Dole on which many universities had built their IP and technology transfer policies. Whereas Bayh–Dole was itself built on the mistaken assumption that *all* contractors were requiring assignments—and likely present assignments at that—from all inventive employees, this crucial link in the chain of title may never have been secured by universities and was certainly later lost in the translation of decades of government patent policy. But universities, which had widely varying policies as to requiring assignment of inventions from faculty, seemed to welcome Bayh–Dole in part as a backstop to secure title by operation of law for federally funded inventions. This allowed “faculty rights friendly” universities such as Stanford to have it both ways. They could set up formal IP policies to “allow all rights to remain with the inventor if possible,” while relying on Bayh–Dole’s provisions to transfer title to them by operation of law for federally funded inventions. Further exacerbating the matter was the subsuming of the obligations for contractors to secure necessary rights from employees into the GSA and Bayh–Dole regulations. It did not help matters that these regulations were difficult to decipher without knowledge of their purpose or history. Some universities appeared to read

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252. *Stanford*, 583 F.3d at 844.

253. *Id.* at 845.

254. *Id.* (quoting *Fenn v. Yale Univ.*, 393 F. Supp. 2d 133, 141–42 (D. Conn. 2004)).

them as simply requiring after-the-fact formal assignments as a technicality to help the university or government perfect title in the invention with the PTO.

Stanford petitioned the Supreme Court for certiorari on the Bayh-Dole issue only with the following question:

Whether a federal contractor university's statutory right under the Bayh-Dole Act, 35 U.S.C. §§ 200–212, in inventions arising from federally funded research can be terminated unilaterally by an individual inventor through a separate agreement purporting to assign the inventor's rights to a third party.<sup>255</sup>

The Supreme Court granted certiorari and affirmed the Federal Circuit. In particular, it reaffirmed its earlier holdings that rights in an invention belong to the inventor, absent some express transfer between the inventor and his employer or another.<sup>256</sup> It rejected Stanford's argument that Bayh-Dole is a "vesting statute" similar to the Atomic Energy Act, in which title to relevant inventions is vested in designated agencies by act of law.<sup>257</sup> The Court then focused on the definition under Bayh-Dole which requires that a "subject invention" be an "invention of the contractor."<sup>258</sup> Under the majority's view, the emphasized portion would be superfluous if *any* invention arising under federal funding were subject to Bayh-Dole.<sup>259</sup> Instead, the Court held that a subject invention is one to which the contractor lawfully has rights or title.<sup>260</sup>

Most importantly, the Court found that the title-allocation scheme under section 202(d), which leaves the inventor with only a conditioned residual interest, applies only to subject inventions (i.e., those to which the contractor has already obtained title).<sup>261</sup> In other words, the contractor has to first obtain rights to inventions created by its employees, and then if federal funding is used in the conception or actual reduction to practice of these inventions, the scheme of section 202(d) controls. Thus, just as its predecessor in the GSA regulations had done, section 202(d) operates as a control mechanism for inventors who have already assigned their inventions to the contractor. If the contractor and government later fail to elect title as between them, and thus imply that they have no interest in bringing the invention to practical

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255. Petition for Writ of Certiorari at i, Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc., 131 S. Ct. 502 (2010) (No. 09-1159) (mem.), 2010 WL 1138571, at \*i.

256. Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc., 131 S. Ct. 2188, 2195 (2011).

257. *Id.* at 2195–96.

258. *Id.* at 2196 (emphasis added).

259. *Id.*

260. *Id.*

261. *Id.* at 2197–98.



application, then the inventor can petition to get her rights back so that she can commercialize the invention. This of course is entirely consistent with the deep history developed in this article and the mistaken assumption upon which government patent policy, including Bayh-Dole, has been based since the Biddle Report.<sup>262</sup>

Ironically, the Court concluded by effectively updating the Biddle Report's faulty conclusion for the twenty-first century:

Though unnecessary to our conclusion, it is worth noting that our construction of the Bayh-Dole Act is reflected in the common practice among parties operating under the Act. Contractors generally institute policies to obtain assignments from their employees . . . . As just noted, universities typically enter into agreements with their employees requiring the assignment to the university of rights in inventions.<sup>263</sup>

But Stanford was not an anomaly in its assignment policy and CPA form. Many other universities used "promise to assign" language, and some, like Pitt, were relying on policies in nonbinding faculty handbooks to impose the assignment obligation. The Court was thus more accurate when it cited federal agency requirements for contractors to secure assignments from employees:

Agencies that grant funds to federal contractors typically expect those contractors to obtain assignments. So it is with NIH, the agency that granted the federal funds at issue in this case. In guidance documents made available to contractors, NIH made clear that "[b]y law, an inventor has initial ownership of an invention" and that contractors should therefore "have in place employee agreements requiring an inventor to 'assign' or give ownership of an invention to the organization upon acceptance of Federal funds." . . . Such guidance would be unnecessary if Stanford's reading of the statute were correct.<sup>264</sup>

However, even this assessment is not quite right. First, the Court should have located and cited the Bayh-Dole regulation that requires contractors to obtain written agreements from their employees to protect the government's interest. As discussed above, this neither necessarily requires a present assignment of expectant interests, nor even clearly tells contractors to obtain a

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262. The Author wrote the Supreme Court amicus brief submitted by AIPLA in *Stanford* which placed a version of this history and the requirement for contractor to secure assignment from inventors before the Court. Brief of Amicus Curiae, Am. Intell. Prop. Law Ass'n in Support of Neither Party, *Stanford*, 131 S. Ct. 2188 (No. 09-1159), 2010 WL 5312674.

263. *Stanford*, 131 S. Ct. at 2199 (citations omitted).

264. *Id.* (citations omitted).

patent assignment. But it is hard to imagine what else would adequately protect the government's interest. If our version of history is correct, DoC staff who promulgated the Bayh-Dole regulations may simply have not wanted to mandate an express requirement of patent assignments for a contractor's employees, and certainly not an exact form of such agreement, because this was not expressly authorized under Bayh-Dole's statutory provisions. Further, the mistaken assumption following from the Biddle Report still enabled government patent policy makers to leave the task of securing appropriate rights from contractor employees to the contractors themselves. In some ways, it was a convenient fiction for all parties involved.

In the end, the Court's most astute and practical observation was that "[w]ith an effective assignment, those inventions—if federal funded—become 'subject inventions' under the Act, and [section 202(d)] as a practical matter works pretty much the way Stanford says it should."<sup>265</sup> But, the uncertainty of what constituted an "effective assignment" and whether all university contractors would put them in place, troubled the dissent.<sup>266</sup> At the same time, the dissent misread the history, or at least read it through the eyes of those who had always believed that federal funding should result in government ownership or public dedication of the inventions, such as the Biddle Report and the *Squier* and *Houghton* courts. Thus, the dissent was concerned that federally funded inventions would improperly wind up in private hands.<sup>267</sup> But the Supreme Court, multiple presidential administrations, and even Congress (by passing Bayh-Dole) have rejected the strong government title and public dedication view. Accordingly, the real problem remains the mistaken assumption that contractors are all able and willing to institute such "effective assignment" agreements with employees. This has not been fixed by the Court's decision in *Stanford*.

#### CONCLUSION

Government patent policy underwent profound changes in the twentieth century. With roots in nineteenth century case law that intertwined issues of government use of private patents, ownership and use of government employee inventions, and ownership and use of contractor inventions, government patent policy became regularized through Congressional acts and executive orders. But the faulty conclusion of the Biddle Report that contractors were securing assignments from employees led to the likewise flawed conclusion that government patent policy need only concern itself with the relationship between contractor entities and the government.

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265. *Id.*

266. *Id.* at 2202–04.

267. *Id.*

Arising from a highly influential and authoritative report issued at the inception of the post-war boom in federal extramural R&D spending, these twin conclusions were bound to be relied on. And indeed they justified a mistaken assumption that all contractors were, and would continue, securing assignments from employees. While government officials who promulgated the GSA and Bayh-Dole regulations sought to operationalize this assumption by requiring contractors to obtain written agreements to protect the government's interests, the language of the regulations was too cryptic to push universities to institute present assignments of expectant interests similar to the practice of private firms. As the balance of federal extramural R&D funding flipped from private firms to universities, the failure of the latter to secure present assignments became a problem.

We are likely just seeing the beginning of these problems. There are now decades worth of “promises to assign” and inadequate faculty handbook policies purporting to assign faculty inventions. Even as universities scramble to replace these inadequate forms with present assignments, the repercussions of inventions that may have already been assigned to third parties may be felt for years to come. Further, it is not clear that universities will be able or willing to impose new present assignment agreements upon their faculty without some form of consideration or shared governance consultation. At the same time, both the dissent in *Stanford* and some commentators believe that the Federal Circuit's distinction between present assignments and promises to assign, as well as its creation of “Federal Circuit law” (essentially federal common law), are wrong as a matter of law.<sup>268</sup> Accordingly, legal challenges will likely arise on these points. Depending on the outcome of those challenges, universities may need to yet again overhaul their assignment practices.

At the same time, faculty inventors are feeling their power and many groups are pushing for more faculty-inventor rights, including the right to choose licensing agents for their inventions—even if they must still assign ownership to their university employer.<sup>269</sup> Some allege that university technology transfer offices are not very good at facilitating the practical application of faculty inventions,<sup>270</sup> hindering both commercialization—patents, licenses, and revenues—and willingness to explore free, open, and low cost dissemination of the inventions for the public good. Thus, *Stanford v. Roche* is not the end of the story; it is rather the beginning of a new chapter in the ongoing and complex dialogue regarding government patent policy. Hope-

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268. *Id.* at 2202–03.

269. *See, e.g.*, IP ADVOCATE, <http://www.ipadvocate.org> (last visited Feb. 4, 2013).

270. *Id.*; *see also* Robert E. Litan et al., *Commercializing University Innovations: A Better Way* (Nat'l Bureau of Econ. Research Working Paper JEL No. O18, M13, 033, 034, 038 Apr. 2007).

fully this time contractor employees will be brought into the mix, both as participants and as a class of stakeholders whose rights and obligations must be expressly part of any new policies that emerge.