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## Origins of the EEA

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In the early 19th century, the British economy—one of the world’s largest and most important—was founded largely on the exchange of opium for tea. The British East India Company exported opium from India to China, using the proceeds to purchase tea, which it sold in England. Taxes on tea—nearly 10 percent of the British government’s revenue—financed the “necessities of an emergent industrial nation,” including railroads at home and the management of colonies abroad.<sup>1</sup>

But not everyone was pleased with the opium-for-tea economy, including the Chinese government, a significant proportion of whose citizens had become addicted to opium. China officially banned the sale of opium in 1729, but sales steadily increased. By 1839, the Chinese government had had enough, seizing three million pounds of the drug from British traders and destroying it, triggering the first Opium War between Britain and China.<sup>2</sup> The modern British Navy soundly defeated the Chinese forces, and the British victory in the war gave British merchants new opportunities for trade with China.

China, however, held a near monopoly on the cultivation of tea, and British politicians worried that a humiliated China might legalize the cultivation of opium in that country, depriving England of tea, and the British government of a critical source of revenue. To avoid that, Britain determined to grow tea in India, where the climate and topography resembled that of China’s tea-growing regions. Doing so, however, required plants, seeds, and “the centuries-old knowledge of

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1. SARAH ROSE, *FOR ALL THE TEA IN CHINA* 1-2 (RANDOM HOUSE 2009).

2. *Id.* at 2-3.

## Chapter 1

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accomplished Chinese tea manufacturers.”<sup>3</sup> To get them, Britain turned to Robert Fortune, a horticulturalist with no formal education, dispatched by the Royal Horticultural Society to conduct a three-year botanical expedition into China. Wearing disguises and fighting off pirates, Fortune committed what may have been the greatest trade secret theft in history, bringing seeds, plants, and the secrets of tea cultivation to England and breaking the Chinese monopoly.

England is not the only nation to owe its economic standing, at least in part, to the theft of trade secrets. Historian Doron Ben-Atar has written that “[t]he United States emerged as the world’s industrial leader by illicitly appropriating mechanical and scientific innovations from Europe.”<sup>4</sup> In 1768, in Lancashire, England, Richard Arkwright and John Kay patented a water-powered spinning frame that revolutionized yarn manufacture. A decade later, Samuel Slater, an indentured servant in a Derbyshire mill using the Arkwright water frame, emigrated to America—bringing his detailed knowledge of the device with him—and built the first water-powered cotton mill in the United States. He became known as “the father of the American industrial revolution,”<sup>5</sup> but also as “Slater the Traitor” to Britons who feared losing their mill jobs to Americans.<sup>6</sup>

In short, “engaging in economic espionage is something developing countries do.”<sup>7</sup> And developed countries enact laws to stop it. During the Industrial Revolution, England banned the export of machines and the emigration of skilled workers, and American industrial spies were often jailed. And in 1996, the United States—the world’s leading economic power, and its strongest advocate for tough intellectual-property enforcement<sup>8</sup>—enacted the Economic Espionage Act (EEA),<sup>9</sup> imposing federal criminal penalties for the theft of trade secrets.

Congress had become concerned that the growing scope of trade secret theft outstripped the ability of available statutory remedies to prevent it. Then-FBI Director Louis Freeh testified before the Senate Select Committee on Intelligence and Judiciary Subcommittee on Terrorism, Technology, and Government Information, that:

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3. *Id.* at 5-6

4. DORON BEN-ATAR, *TRADE SECRETS* (Yale University Press, 2004) at xxi.

5. See James Sierowiecki, *Spy vs. Spy*, *THE NEW YORKER* (June 9, 2014), *available at* <http://www.newyorker.com/magazine/2014/06/09/spy-vs-spy-3>.

6. Newil Heath, “Samuel Slater: American hero or British traitor?,” *BBC News*, Sept. 22, 2011, *available at* <http://www.bbc.co.uk/news/uk-england-derbyshire-15002318>.

7. James Sierowiecki, *Spy vs. Spy*, *THE NEW YORKER* (June 9, 2014), *available at* <http://www.newyorker.com/magazine/2014/06/09/spy-vs-spy-3>.

8. *Id.*

9. 18 U.S.C. §§ 1831-39.

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The development and production of intellectual property and advanced technologies is an integral part of virtually every aspect of United States trade, commerce, and business. Intellectual property, that is, government and corporate proprietary economic information, sustains the health, integrity, and competitiveness of the American economy, and has been responsible for earning our nation's place in the world as an economic superpower. The theft, misappropriation, and wrongful receipt of intellectual property and technology, particularly by foreign governments and their agents, directly threatens the development and making of the products that flow from that information. Such conduct deprives its owners—individuals, corporations, and our nation—of the corresponding economic and social benefits.<sup>10</sup>

Director Freeh estimated that the loss of proprietary information by U.S. government and private industry exceeded \$24 billion per year.<sup>11</sup> Nearly half of the more than 300 companies responding to a 1995 survey indicated that they had experienced a trade secret theft.<sup>12</sup> A representative of Intel Corporation told Congress that in 1996, the company suffered a theft of information worth as

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10. Joint Hearing Senate Select Committee on Intelligence and Judiciary Subcommittee on Terrorism, Technology, and Government Information 10-11 (Feb. 28, 1996) (statement of FBI Director Louis Freeh), *available at* <https://www.intelligence.senate.gov/sites/default/files/hearings/economicespionag00unit.pdf>. Director Freeh also testified that additional protection for trade secrets was necessary for national security. He testified that the FBI was, at the time, investigating alleged incidents of economic espionage conducted against the United States by “23 foreign powers.” *Id.* at 12. Congress observed that since the Cold War had drawn to a close, espionage had evolved. The House Committee on the Judiciary noted, “Economic superiority is increasingly as important as military superiority. And the espionage industry is being retooled with this in mind.” H.R. REP. 788, 104th Cong., 2d Sess., 1996 WL 532685 \*5, 1996 U.S.C.C.A.N. 4021, 4024-25.

11. Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 4 (May 9, 1996) (statement of The Honorable Louis J. Freeh, Director, Federal Bureau of Investigation). Director Freeh characterized this estimate as “very soft,” and indicated that intellectual property theft is underreported and difficult to prosecute, and that others estimated much higher losses. *Id.*; *see also* *United States v. Hsu*, 155 F.3d 189, 194 (3d Cir. 1998) (“The end of the Cold War sent government spies scurrying to the private sector to perform illicit work for businesses and corporations, and by 1996, studies revealed that nearly \$24 billion of corporate intellectual property was being stolen each year.”) (citing RICHARD J. HEFFERNAN & DAN T. SWARTWOOD, *TRENDS IN INTELLECTUAL PROPERTY LOSS* 4, 15 (1996); Remarks of Eric H. Holder, Jr., Deputy Attorney General, U.S. Department of Justice, July 23, 1999, *available at* <https://web.archive.org/web/20000604154816/http://www.cybercrime.gov/dagipini.htm>. (“[a]t the same time that our information economy is soaring, so is intellectual property theft”); James M. Fischer, *Note: An Analysis of the Economic Espionage Act of 1996*, 25 SETON HALL LEGIS. J. 239, 244 (2001) (citing studies).

12. S. REP. No. 104-359 (1996), 1996 WL 497065 \*8.

## Chapter 1

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much as \$300 million,<sup>13</sup> and the president and chairman of Fonar Corporation—which developed and built the first MRI scanner—testified that the theft of a technical drawing of that scanner, and critical technology, resulted in foreign corporations producing the majority of the world’s MRI scanners two decades later.<sup>14</sup>

At the same time, a growing consensus believed that the remedies then available were insufficient to combat trade secret theft. Before enactment of the EEA, federal prosecutors were required to “shoe-horn[]” crimes involving the theft of information into statutes designed to address physical objects.<sup>15</sup> The National Stolen Property Act (NSPA) requires proof that a defendant “transport[ed] a physical object (“goods, wares, merchandise, securities or money”) that was “stolen, converted, or taken by fraud.”<sup>16</sup> In 1985, in *Dowling v. United States*,<sup>17</sup> the Supreme Court held that the NSPA does not apply to misappropriation of copyrighted material because “the taking that occurs when an infringer arrogates the use of another’s protected work [does not] comfortably fit[] the terms associated with physical removal employed by [§] 2314.”<sup>18</sup> The Court wrote that:

The infringer invades a statutorily defined province guaranteed to the copyright holder alone. But he does not assume physical control over the copyright; nor does he wholly deprive its owner of its use.<sup>19</sup>

Like copyrights, trade secrets are not physical objects, but a legally defined “province guaranteed to the [owner] alone,” which can be misappropriated without transportation of any physical object. Thus, the *Dowling* decision cast significant

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13. See Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 40 (May 9, 1996) (statement of David M. Shannon, Senior Counsel, Worldwide Sales and Marketing, Intel Corp.).

14. See Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 29–30 (May 9, 1996) (statement of Raymond Damadian, M.D., president and chairman, Fonar Corp.).

15. S. REP. No. 359, 104th Cong., 2nd Sess. 1996, 1996 WL 497065 \*9. The federal Trade Secrets Act, 18 U.S.C. § 1905, enacted in 1948, prohibits trade secret misappropriation, but only by government employees.

16. 18 U.S.C. § 2314.

17. 473 U.S. 207 (1985).

18. 473 U.S. 207, 217 (1985).

19. *Id.*

20. See *United States v. Aleynikov*, 3d 71, 82 (2d Cir. 2012) (“[t]he EEA was passed after the Supreme Court and the Tenth Circuit said the NSPA did not cover intellectual property”); *United States v. Brown*, 925 F.2d 1301, 1307 (10th Cir. 1991) (applying *Dowling* to find that § 2314 does not apply to stolen computer program in source code form); *United States v. Kwan*, 995 F. Supp. 2d 340, 348 (E.D. Pa. 2014) (NPSA inapplicable to stolen information because statutory term “goods, wares, and merchandise: requires ‘some sort of tangible existence’”).