

Spy Vs. Spy

James Surowiecki, *Spy vs. Spy*,

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Last month, Attorney General Eric Holder announced that the United States was charging members of the Chinese military with economic espionage. Stealing trade secrets from American companies, he said, enabled China to “illegally sabotage” foreign competitors and propel its own companies to “success in the international marketplace.” The United States should know. That’s pretty much how we got our start as a manufacturing power, too.

“The United States emerged as the world’s industrial leader by illicitly appropriating mechanical and scientific innovations from Europe,” the historian Doron Ben-Atar observes in his book “Trade Secrets.” Throughout the late eighteenth and early nineteenth centuries, American industrial spies roamed the British Isles, seeking not just new machines but skilled workers who could run and maintain those machines. One of these artisans was Samuel Slater, often called “the father of the American industrial revolution.” He emigrated here in 1789, posing as a farmhand and bringing with him an intimate knowledge of the Arkwright spinning frames that had transformed textile production in England, and he set up the first water-powered textile mill in the U.S. Two decades later, the American businessman Francis Cabot Lowell talked his way into a number of British mills, and memorized the plans to the Cartwright power loom. When he returned home, he built his own version of the loom, and became the

most successful industrialist of his time.

The American government often encouraged such piracy. Alexander Hamilton, in his 1791 “Report on Manufactures,” called on the country to reward those who brought us “improvements and secrets of extraordinary value” from elsewhere. State governments financed the importation of smuggled machines. And although federal patents were supposed to be granted only to people who came up with original inventions, Ben-Atar shows that, in practice, Americans were receiving patents for technology pirated from abroad.

Piracy was a big deal even in those days. Great Britain had strict laws against the export of machines, and banned skilled workers from emigrating. Artisans who flouted the ban could lose their property and be convicted of treason. The efforts of Thomas Digges, America’s most effective industrial spy, got him repeatedly jailed by the Brits—and praised by George Washington for his “activity and zeal.” Not that the British didn’t have a long history of piracy themselves. In 1719, in Derby, Thomas Lombe set up what’s sometimes called the first factory in the United Kingdom, after his half brother made illicit diagrams of an Italian silk mill. (Lombe was later knighted.) And in the nineteenth century Britain’s East India Company, in one of the most successful acts of industrial espionage ever, sent a botanist to China, where he stole both the technique for processing tea leaves (which is surprisingly complex) and a vast collection of tea plants. That allowed the British to grow tea in India, breaking China’s stranglehold on the market.

These days, of course, things have changed. The United States is the world’s biggest advocate for enforcing stringent intellectual-property rules, which it insists are necessary for economic growth. Yet, as our own history suggests, the economic impact of technology piracy isn’t straightforward. On the one hand, patents and trade secrets can provide an incentive for people to innovate. If you realized that a new invention was going to get ripped off by China, you might not invest the time and money needed to come up with it in the first place. On the other hand, patents and trade secrets limit the diffusion of new technology—and sometimes slow down technological progress—while copying accelerates it. Samsung, for instance, is known for being a “fast follower” in its consumer business, which really means that it’s adept at copying other companies’ good ideas. That’s not the same as theft, but evidence from its recent patent trials with Apple shows that Samsung’s response to the iPhone was, in large part, simply to do it “like the iPhone.” This was bad for Apple’s bottom line, but it meant that many more people ended up enjoying the benefits of Apple’s concepts.

Patents and trade secrets also limit the kind of innovation that comes from putting a new spin on existing technologies. In Silicon Valley, engineers historically migrated with ease from company to company, in part because California prohibits most non-compete provisions. And, as they moved, they inevitably carried pieces of their old companies’ intellectual property with them. A good thing, too. As the Berkeley scholar AnnaLee Saxenian has convincingly argued, this practice was one reason the Valley became so

innovative. Or take the case of Francis Cabot Lowell. He didn't just copy plans for the Cartwright loom; he improved it, and then he made it part of the first integrated textile factory in America. Lowell was a genuine innovator. But, had he not copied the loom, his factories would never have had a chance to work.

That's not to say that the U.S. should turn a blind eye to China's piracy—the Justice Department is supposed to look after the interests of American citizens. But, just as in a loom factory, the pattern repeats: engaging in economic espionage is something developing countries do. When you're not yet generating a lot of intellectual property on your own, you imitate. These days, China is going to try to steal, and the West is going to try to stop it. But the tactic of using piracy to leapfrog ahead? That looks like an idea it stole from us. ♦

